

ANDERS WALLACE

User Experience Research, Design, and Strategy

I'm a user experience researcher, designer, and strategist.

I work to connect people through new media. This means expanding people's sense of what's possible by creating digital experiences that enlarge their world. This also means I help organizations understand their users, make sense of their data, and transform digital projects into cohesive and engaging experiences.

I do this by leveraging my background as a cultural anthropologist to generate insights on complex human challenges and deliver scalable solutions at the cutting edge of business, technology, and social innovation.

For me, usability isn't just a goal. It's a working method rooted in empathy, flexibility, and creative problem-solving skills. I've practiced these skills in my many cross-functional collaborations working with computer scientists, data scientists, and information scientists, as well as designers, psychologists, historians, art historians, architects, classicists, disability scholars, and actors.

I am also an expert project manager, creative thinker, communicator, and human behavior analyst. I speak five languages, and am recognized for my adaptability, self-starting nature, and skill in connecting with a diverse range of stakeholders around the world.



What can I do for you? I'll use a multi-methods toolbox to deeply understand your target audience and extract transformative insights that drive innovation in your product design, branding and marketing, or strategic growth.

I conduct user research, surveys, and ethnography, sketch storyboards, create user flows, make wireframes and interactive prototypes, mine digital texts, explore social networks, and map social spaces and behaviors.

I'll deliver innovative ways of understanding a problem. I'll also create solutions - be they in the form of facilitating workshops, creating impactful presentations, authoring articles or white papers, designing apps or websites, or developing data visualizations and other visual content and branding materials - that deliver value above and beyond my partners' expectations and enrich the organization or brand behind any single project.

I'm comfortable working independently or in teams, my successes stand on the foundation of building cross-functional partnerships. I'll share some of these with you in the case studies that follow.

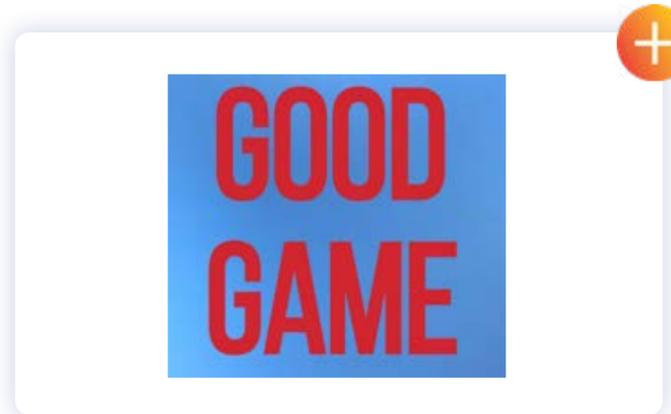


SELECT WORK

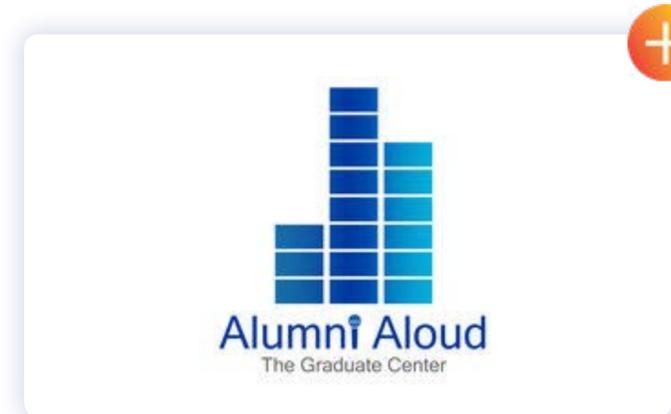
Some projects I've done



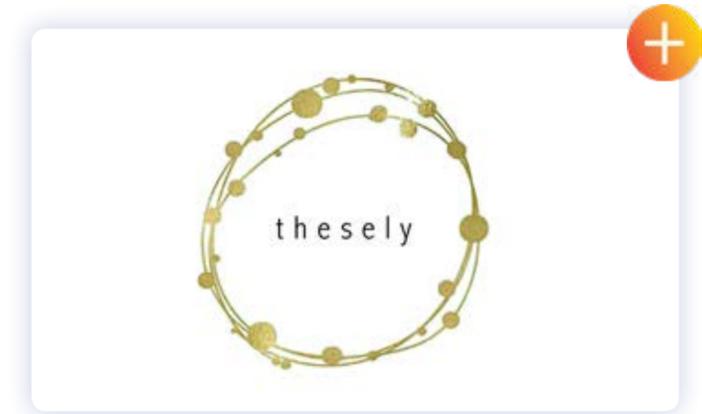
Social network for Classicists to connect and create the future of University education in the 21st Century.



Website that harnesses the emotional and empathetic power of storytelling to give life to anthropological research.



Podcast that inspires PhD students to learn about careers that apply their skills and talents outside the University.



Interactive web-driven data visualization tool to engage PhD students in career research and exploration.



Medical rehabilitation chatbot to help hospital outpatients manage pain with lowered risk of opioid addiction.



Online platform to provide streamlined job search functions to students at the Graduate Center.



Prototype for an app to raise awareness of climate change by visualizing the ancient cityscape of Venice, Italy.

CLICK ON THUMBNAILS TO JUMP TO SPECIFIC PROJECTS!



THE PAIDEIA INSTITUTE

What is The Paideia Institute?

The Paideia Institute is a nonprofit organization dedicated to revolutionizing university education by disrupting the study of classical languages and literature for the 21st Century.

How is it unique?

Paideia wanted to understand how to leverage the growing number of classicists pursuing careers outside academia. We realized that increasing the relevance of the Classics meant creating an online social network, the Nexus Project, that would nurture an interest in classics outside traditional academic institutions. This would be a portal for members to meet, interact, and network with each other around the world.

Roles and responsibilities

Conduct user research, design wireframes and mockups, and implement design changes using HTML and SASS to enhance usability and create consistent branding and information architecture with Paideia's other digital offerings.

1. Define Problem



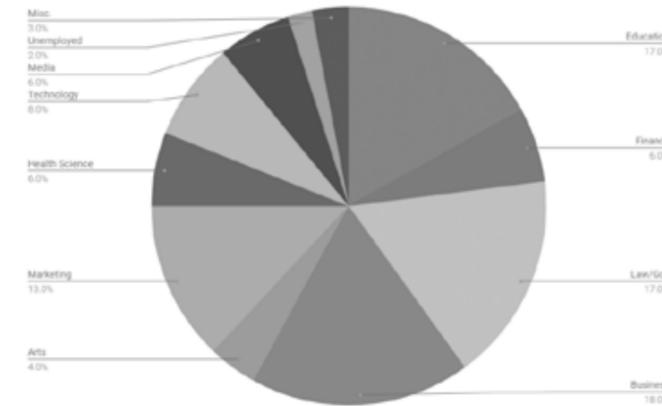
SKILLS USED:

- UX RESEARCH
- WIREFRAMES
- MOCKUPS
- HTML AND CSS



KEY STAKEHOLDERS:

- NEXUS MEMBERS
- PAIDEIA STAFF & DIRECTORS
- WEB DEVELOPMENT TEAM



PROJECT TIMELINE:

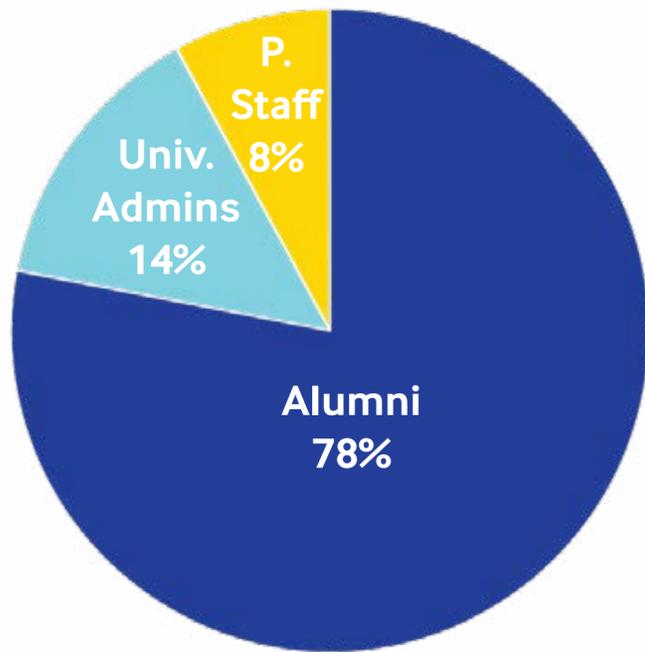
- 6 WEEKS

While universities de-fund arts and humanities programs, classicists are increasingly pursuing non-academic careers.

This creates a self-reinforcing cycle: not enough classicists to staff university jobs, and a dwindling job market that increasingly hollows out one of the pillars of a liberal arts education for young Americans.

The Paideia Institute wanted to understand how to leverage this growing number of classicists working outside academia to transform the value of a classics degree in the 21st Century.

2. Determine User Needs



THE NOSTALGIC



Justin, 42, is a lawyer for a software company. He did a PhD in Classics but declined a teaching job because his wife couldn't relocate. He misses the Classics and **wishes he could give back to the field.** "I miss talking about Cicero's ethics. Whom can I have this conversation with?"

We need our social network to provide not just **biographical user data** but also a **private messaging feature**, so Justin can reach out to like-minded peers.

THE ARCHIVIST



Elise, 27, is an assistant to the chair of the Classics Department at Wesleyan college. She's been tasked with **compiling a database of alumni career outcomes.** Her boss just asked her, "What percentage of our classics majors go to work in finance?"

We need Nexus to provide a range of **optional data fields** for users to **customize their profile** on a discretionary basis.

THE CONNECTOR



Naoko, 41, is program development officer for the Paideia Institute. She'd like to **locate volunteers to help run events.** "Whom do we know who can speak at our fundraiser in Los Angeles next month?"

We need members of Nexus to be **geographically indexed.** We also need Nexus to be **friendly, accessible, and intuitive** to use ways that encourage participation and a willingness to give back to the community.

3. User Journey Maps

Guiding Principles

Many classicists have left the field and want low-friction ways to feel part of the field again.

The goal of reducing friction is in tension with collecting data from our users.

We need to make user data opt-in rather than opt-out to ensure our users' comfort.

Nexus is a community of its own, not as a means to something else.

User Journey

Stages	Reflection	Explore	Make a profile	Customize	Reach out
Nexus	<ul style="list-style-type: none"> • Good SEO to appear in search results • Collaborating with other institutions to spread via word-of-mouth 	<ul style="list-style-type: none"> • List of adult learning initiatives • Sleek and easy-to-use members page 	<ul style="list-style-type: none"> • Relevant search fields for location, interests, and current job 	<ul style="list-style-type: none"> • Setting up action alerts • Email subscriber lists • Providing checkboxes for relevant updates • Creating an app 	<ul style="list-style-type: none"> • Messaging feature • Volunteering page • Volunteering in after-school programs page • Donations page
Doing	<ul style="list-style-type: none"> • Talking with friends • Reading books in spare time • Exploring online 	<ul style="list-style-type: none"> • Accessing Nexus through an email link • Exploring the site • Exploring how to donate to the classics 	<ul style="list-style-type: none"> • Writing about myself • Assessing who I want to connect with 	<ul style="list-style-type: none"> • Looking at other people's profiles • Assessing Paideia Institute's resources 	<ul style="list-style-type: none"> • Writing messages • RSVP'ing for events • Looking up other users • Donating to Paideia
Thinking	<ul style="list-style-type: none"> • Maybe I should have done that classics PhD • I need more intellectual fulfillment • Let's keep classics alive! 	<ul style="list-style-type: none"> • I wonder how this might serve me? • Is this worth my time? • This looks interesting! 	<ul style="list-style-type: none"> • I hope this doesn't take too much time • How much data do I want to share? 	<ul style="list-style-type: none"> • What can I get out of it? • Where's my tribe? • Can I set up notifications or customized alerts? 	<ul style="list-style-type: none"> • Will this person be too busy to reply? • What do we have in common?
Feeling	<ul style="list-style-type: none"> • I feel lonely • I'm hungry for intellectual fulfillment 	<ul style="list-style-type: none"> • I'm excited that I've found this community • I'm curious who else is here and how to connect 	<ul style="list-style-type: none"> • I'm feeling lazy • I'm feeling anxious about my privacy 	<ul style="list-style-type: none"> • I'm feeling lazy • I'm feeling curious • I'm feeling worried about spam and text alerts 	<ul style="list-style-type: none"> • I feel nervous • I feel self-conscious • Whoa, this person is so interesting!
Experience	<ul style="list-style-type: none"> • Nexus is just what I've been looking for! 	<ul style="list-style-type: none"> • Nexus seems easy to navigate and full of promising initiatives by both staff and volunteers 	<ul style="list-style-type: none"> • Nexus wants to hear about me. This makes me feel like it will be a useful network 	<ul style="list-style-type: none"> • Customizable profiles and search features make me feel like Nexus will be relevant to my life 	<ul style="list-style-type: none"> • Social features make me feel like I have a meaningful community again

When I joined the Nexus team, key areas of the service had already been put into place. But, despite the robustness of the early build, still **only eight people had signed up for Nexus.**

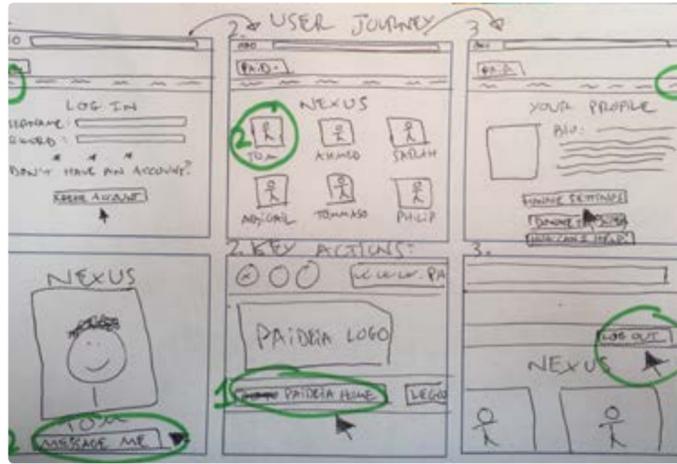
As the anthropologist on a team of classicists and computer scientists spread between the U.S., Italy, and India, I **conducted interviews** with three of these members, as well as with four classicists who are not on Nexus, to **discover their pain points.**

I discovered that members either **didn't know about Nexus**, had **trouble accessing their account**, or **didn't know how to achieve their goal of contacting other Nexus members.**

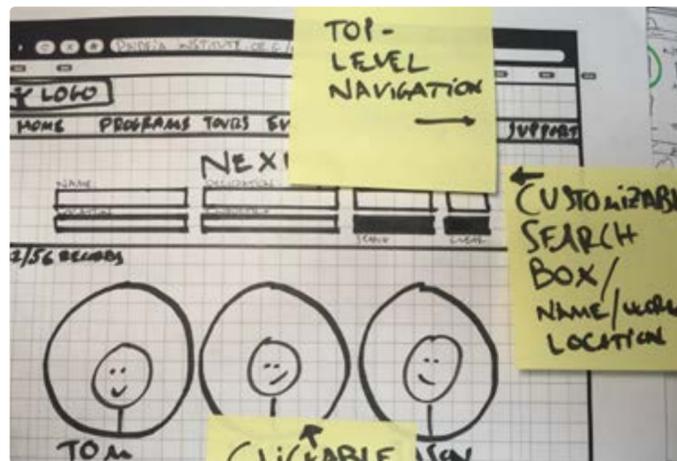
Based on this discovery of users' pain points, I developed **journey maps** for how our set of three personas might use Nexus to achieve their goals.

4. Prototyping User Flows

LO-FI USER FLOW



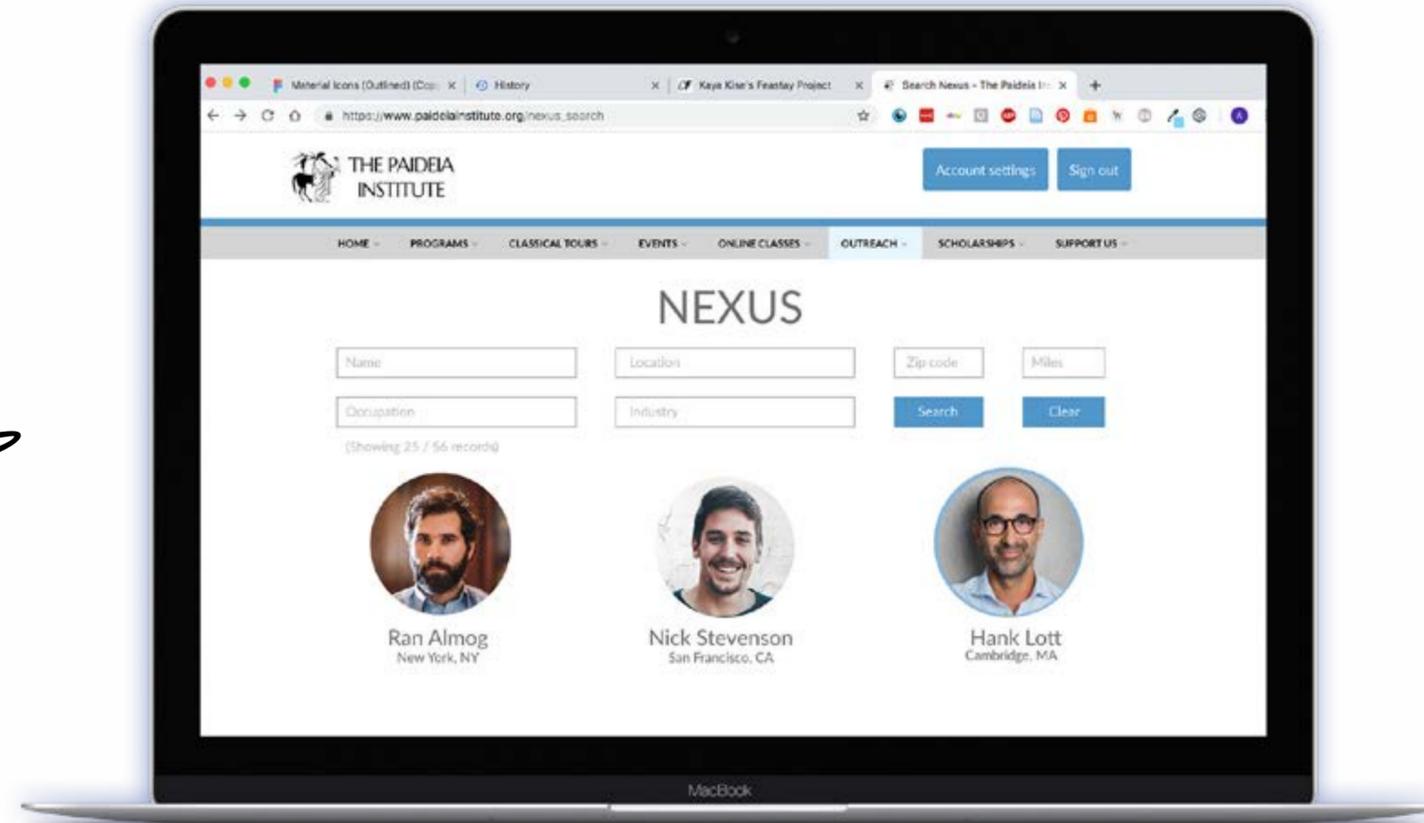
LO-FI MEMBERS AREA MOCKUP



Next, I drilled down and targeted three areas for redesign:

- The sign-in page
- The members forum
- The Nexus homepage

I sketched wireframes and designed mockups to prototype a new sign-in experience and membership page.



HI-FIDELITY MOCKUPS

5. Building Deliverables

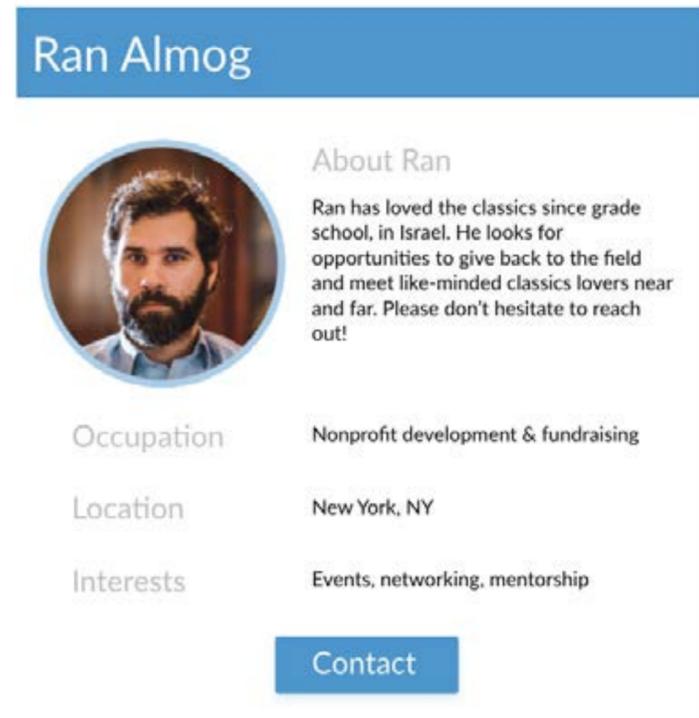
I also created deliverables for specific features in Nexus, such as **popup windows for donations and user profiles.**

I explored **new branding and logo concepts** for the Paideia Institute's online identity, including an app icon for Nexus.

The challenge was to ensure the style, formatting, and strategy behind each of these elements was **consistent with Paideia's overall brand identity and information architecture.**



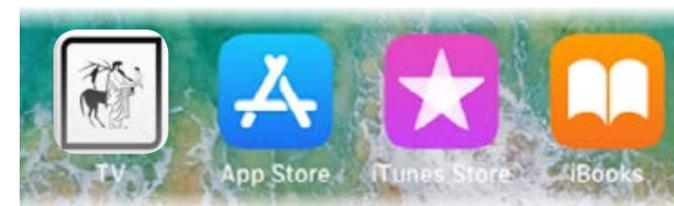
PROTOTYPE FOR NEW DONATION PAGE



PROTOTYPE FOR NEW NEXUS USER PROFILE

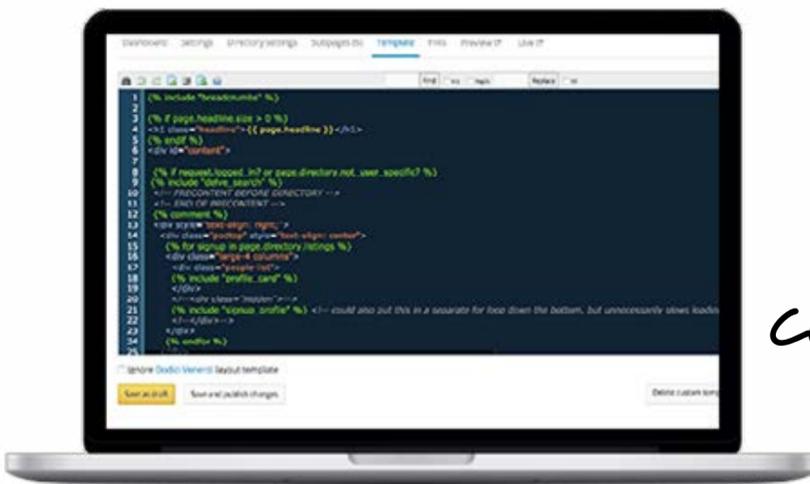
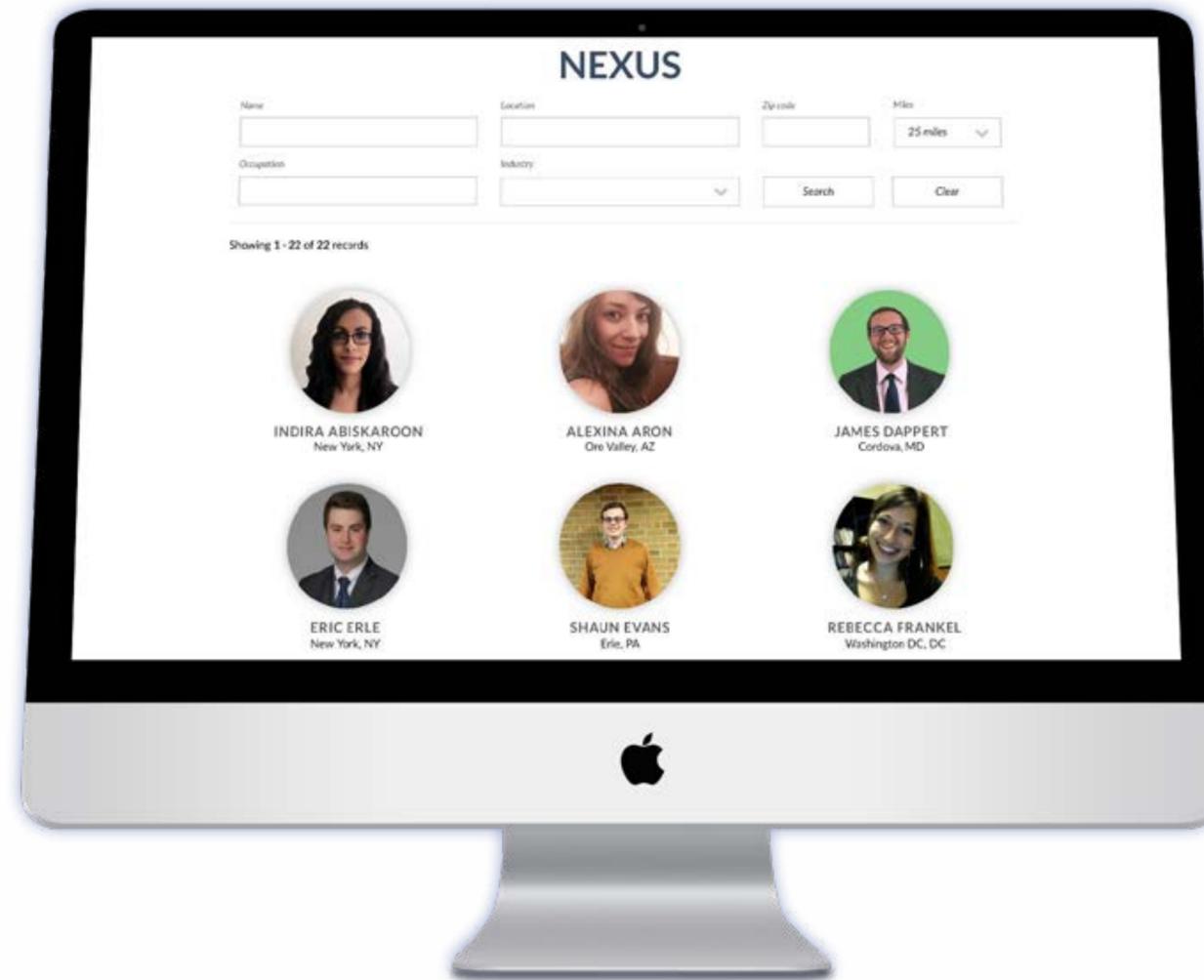
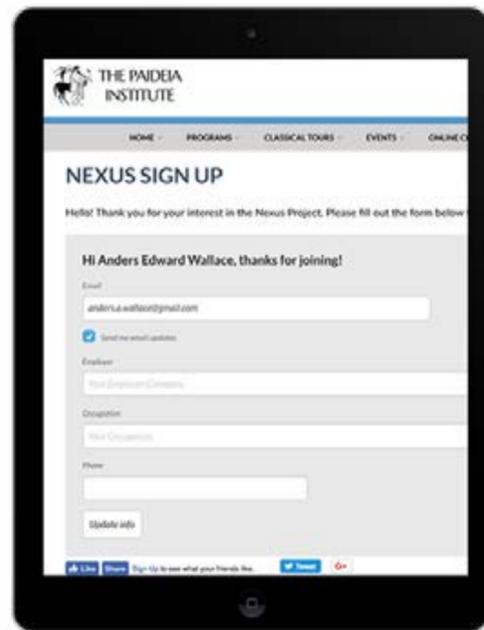


EXPLORING NEW LOGO CONCEPTS AND APP ICONS



6. Implement Our Result

HIGH FIDELITY PROTOTYPE



CODING IN SASS

I also formatted the SASS styles of the homepage and the members forum in Nationbuilder, Paideia's content management system, to ensure accessibility through signposting, navigational elements, and touch-responsive buttons to enhance interactivity.

This involved troubleshooting web development issues by liaising with Nationbuilder support staff, as well as the Paideia web development team in Italy and India.

Our final site is an interactive, search-customizable, user-friendly social network.

What about our impact? In the four weeks since launch, Nexus almost tripled its number of registered users.



What is Good Game?

Good Game is a website that uses the emotional and empathetic power of first-person storytelling to give life to anthropological research in innovative ways.

How is it unique?

Good Game offers a new way of engaging people in understanding anthropological research as an immersive process of discovery. It also challenges users to reconsider controversial social behavior through imaginative leaps that take empathy skills and a sense of exploration.

Roles and responsibilities

Do ethnography, conduct user research, concept ideation, create style guide, create content artifacts, create storyboards and user journeys, design wireframes and mockups, build website using HTML and CSS, conduct usability tests.

1. Define Problem



SKILLS USED:

- ETHNOGRAPHY
- DATA CODING
- DATA VISUALIZATION
- INFORMATION ARCHITECTURE
- JOURNEY MAPPING
- WIREFRAMES
- MOCKUPS
- HTML
- CSS



KEY STAKEHOLDERS:

- YOUNG MEN WITH SOCIAL ANXIETY
- YOUNG PEOPLE WHO ARE CURIOUS ABOUT GENDER
- PHD FACULTY



PROJECT TIMELINE:

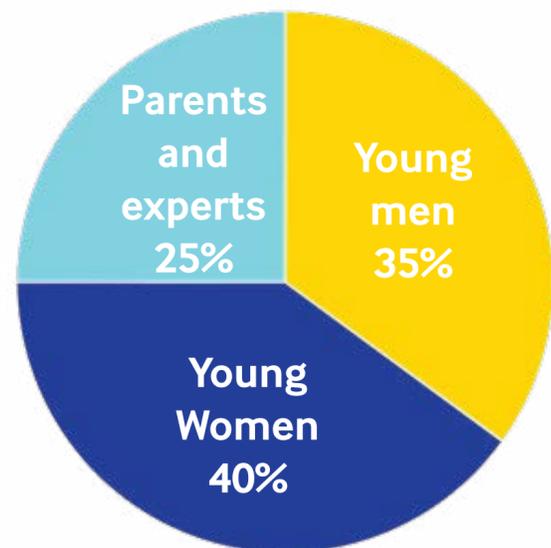
- 16 MONTHS

My PhD dissertation in cultural anthropology explains why heterosexual men are paying big money to **learn seduction and flirting skills** in commoditized self-help workshops in New York City.

Often associated with the online “manosphere” and the alt-right, so-called seduction communities have never before been the object of anthropological analysis. This creates an opportunity.

But academic dissertations are typically read by very few people. How could I **make this research accessible** to the people who need it most, namely young people - male, female, and transgender - whose lives can be affected by potentially toxic ideas about masculinity and femininity?

2. Determine User Needs



THE NICE GUY



Esteban, 26, is a financial analyst for a healthcare startup in New York City. His friend told him he'd been going to a weekly seduction training meetup and wondered if Esteban wants to come to. Esteban admits, "I feel **nervous** sometimes. But that's not something I would do. Still, I can't help but wonder what happens in those courses?"

I need to build something that **appeals to young men** like Esteban. Something that **teaches** him about what's really happening in these groups, so he knows how to support his friend constructively.

THE INFLUENCER



Kate, 34, is a human resources specialist for a nonprofit and a beauty blogger in her free time. During lunch last week, her friend told her about meeting a pickup artist the previous weekend. "These guys seem kind of sad and pathetic," Kate thinks to herself. **"What's the real story?"**

I need to build something that gives young women like Kate a broad **cultural context** to understand why these training courses are popping up now, and what makes them different.

THE NURTURER



James, 66, is a counselor at Loyola University in Chicago. His son, Tom, recently told him about reading Neil Strauss' bestseller "The Game," which details his immersion in the subculture of pickup artists. "I want to know what all that pickup and seduction stuff is really about."

I need to build something that can help take parents like James, and other counselors and policy experts, **inside the minds** of these men to better understand what's going on with young men, sex, and sexual consent in America today.

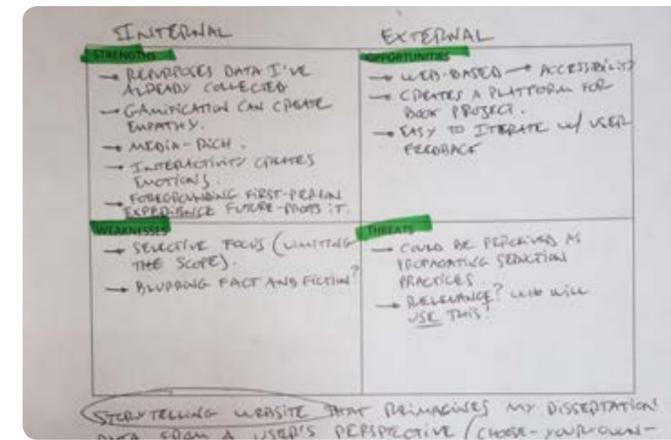
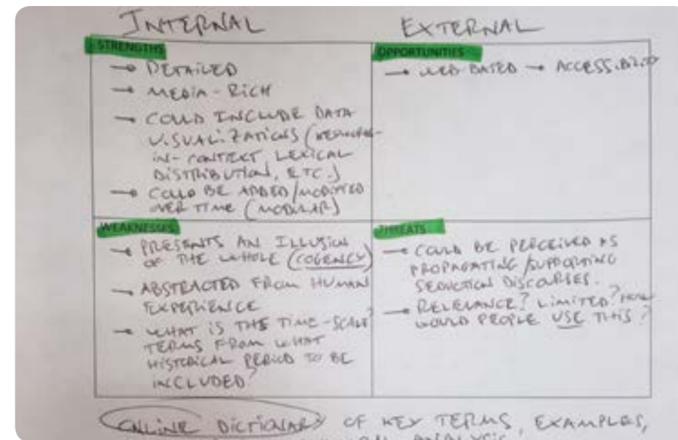
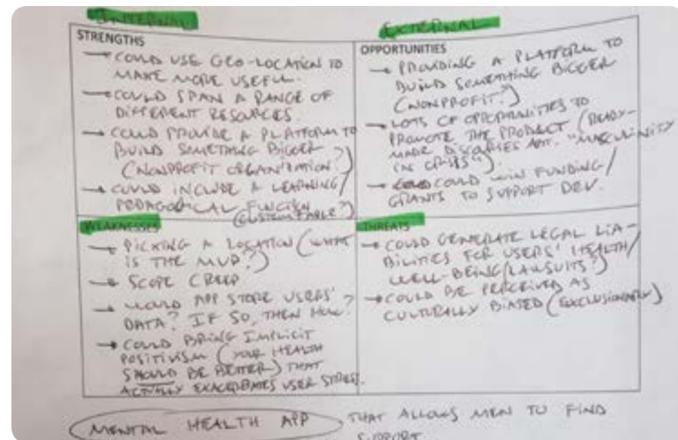
3. Ideate Solutions

In the ideation process, I contemplated different solutions.

An online dictionary? No, too limited in its use cases. It might risk spreading the ideas of seduction training without a critical context for understanding.

An app that can help men find mental health support? Too broad to sustain the practical, ethical, and legal implications of managing users' data privacy and personal wellness.

Inspired by 1990's text-based adventure games, I settled on the idea of a **choose-your-own-adventure** story that uses basic **gamification** to invite users to step into the shoes of a would-be seducer. **This creates a design loop:** emotional responses arise through the reader's experience - their projection as the protagonist of the story - in a mirror image of the way seduction training mediates a seducer's experience of identity.



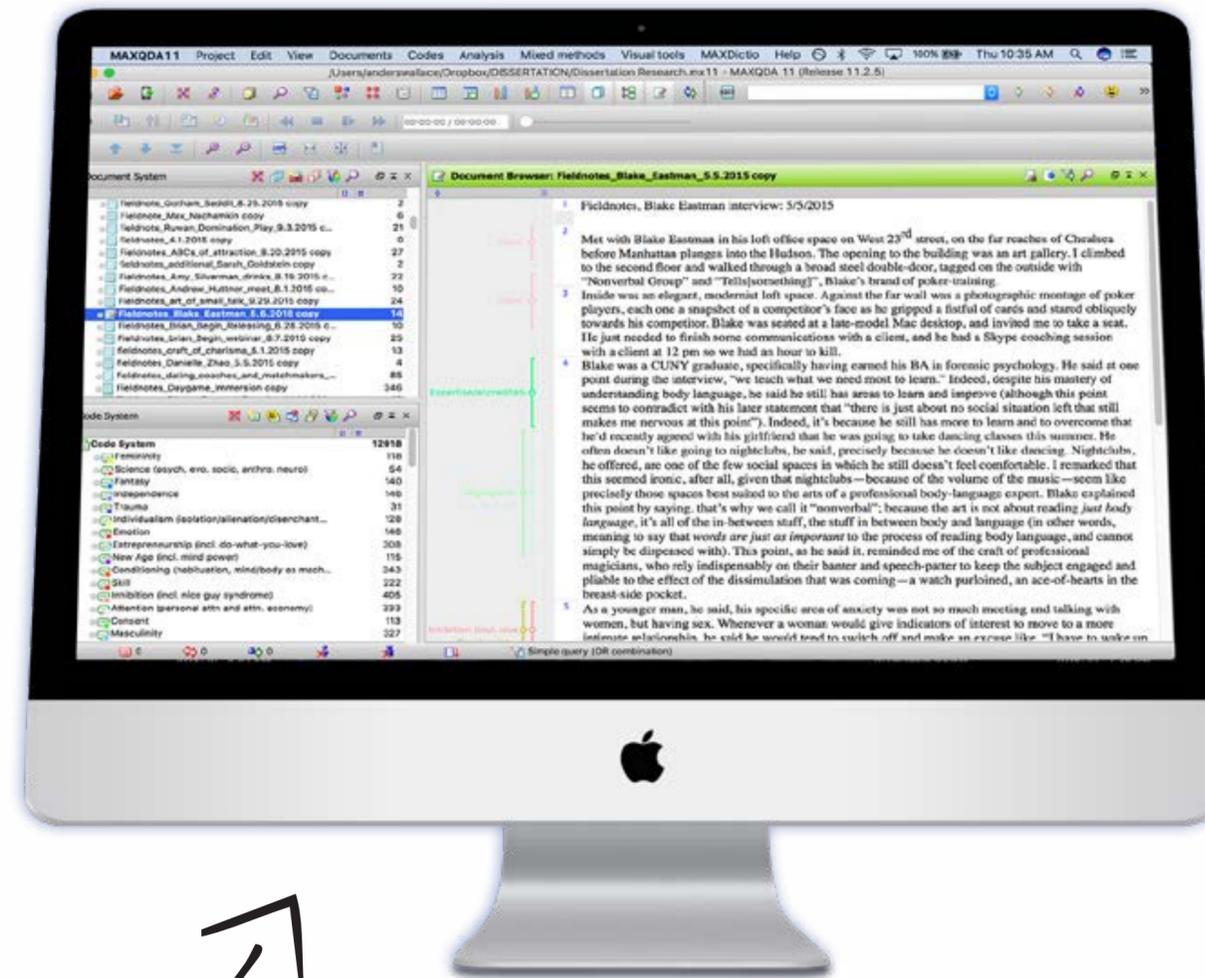
USING SWOT ANALYSIS TO EXPLORE THE STRENGTHS AND WEAKNESSES OF DIFFERENT IDEAS...

4. Gather and Code Data

A PHOTO FROM MY FIELDWORK...



SIFTING THROUGH
INSIGHTS CAN BE
A FULL-CONTACT
SPORT...



CODING DATA IN
MAXQDA

Over the course of twelve months, I collected data through ethnographic fieldwork comprising weekly observations, 65 in-person interviews, media surveys, literature reviews, and digital ethnography on social media sites and usenet chatrooms.

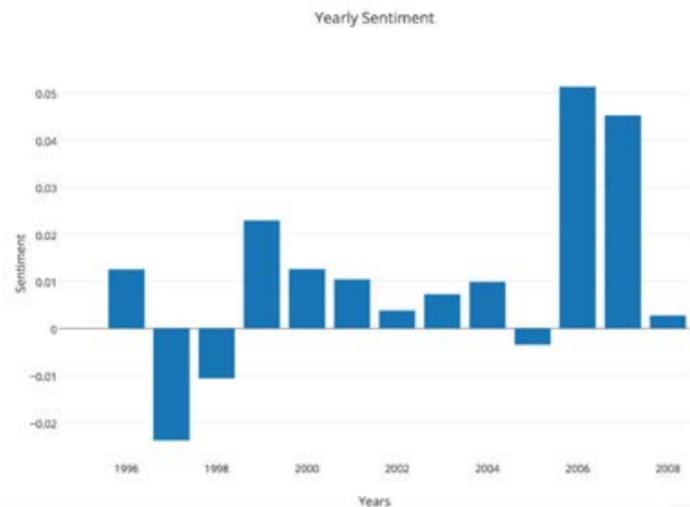
After the data collection phase ended, I spent five months coding 100,000+ data artifacts that emerged from my research on seduction training communities.

Coding consisted of assigning themes and creating code books to capture key variables.

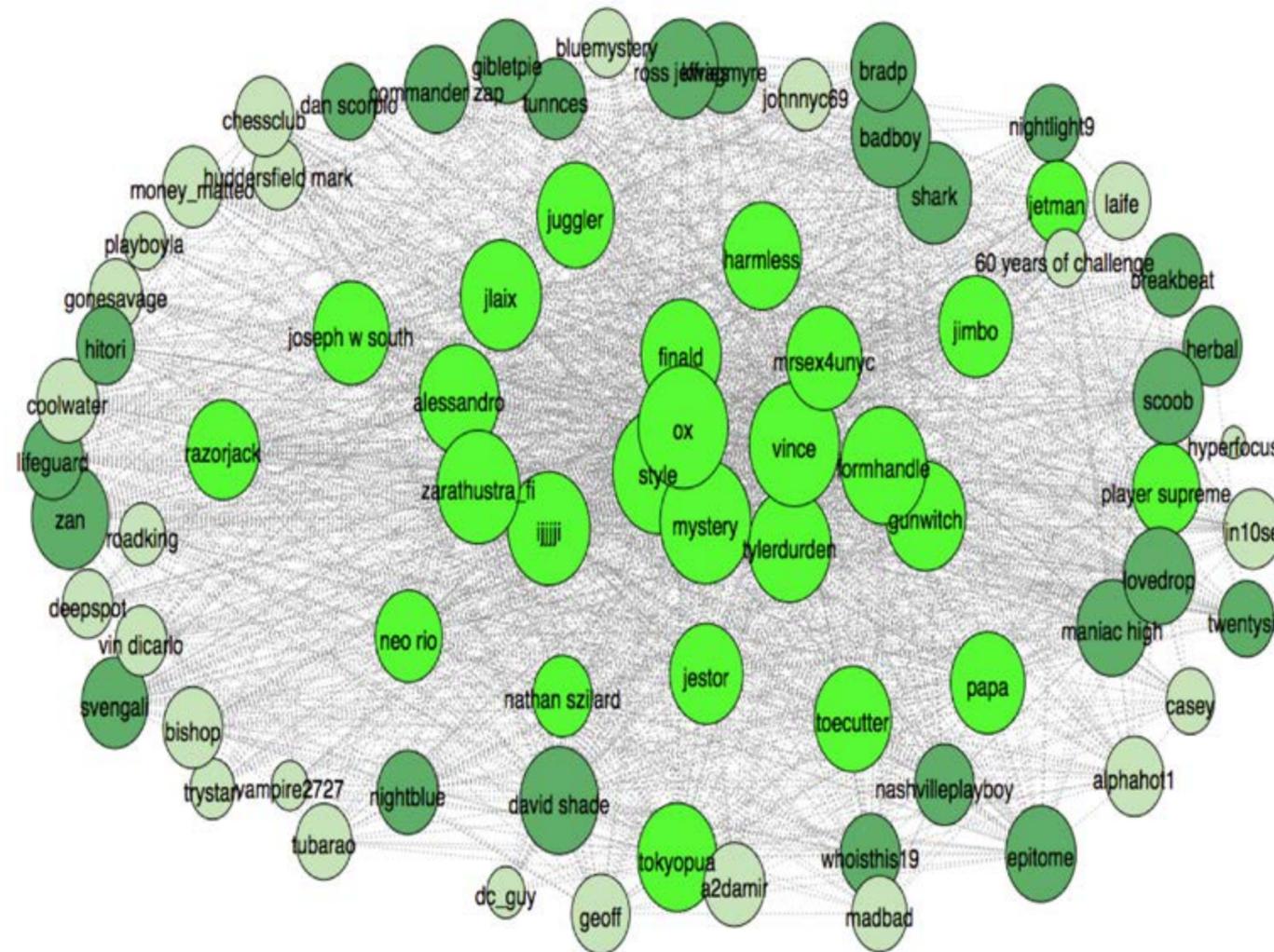
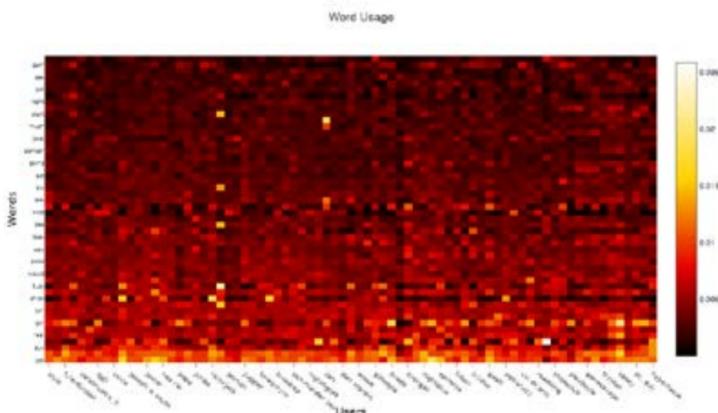
Coding variables were grouped into two overarching categories: first, variables that matter to the men in the study. Second, variables that matter to the research project outcomes.

differences and overlap between these sets of variables allowed me to create new knowledge.

5. Data Visualization



GLOBAL STATISTICS,
VISUALIZED IN PLOTLY...



...LEAD TO FINE-
GRAINED INSIGHTS
ABOUT INDIVIDUALS

After coding the data, I collaborated with a computer scientist to visualize social relationships among the men I researched using python's natural language processing toolkit (NLTK) and Plotly.

This also involved cleaning and labeling unstructured data from online chatrooms.

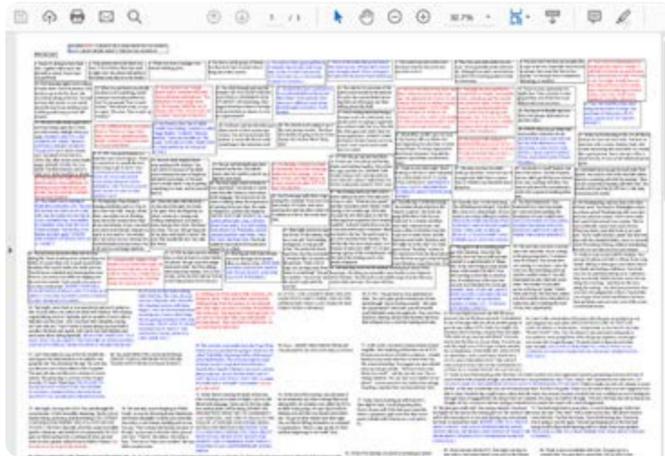
These data visualizations helped me discover hidden meanings in the content of these online forums by modeling underlying semantic networks in these chats using an algorithm similar to Google PageRank.

They helped me analyze large-scale trends in sentiment, emotion, and social hierarchies that are hidden at surface level but become visible at the scale of big data.

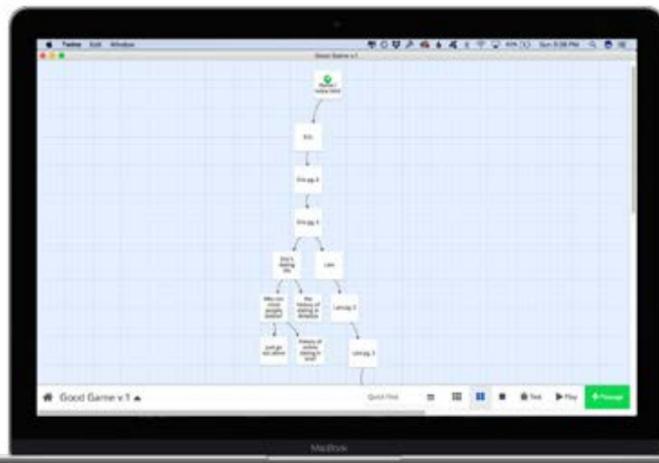
To humanize these insights, I also picked out key quotations from my informants.

6. Mapping User Flows

A QUICK, LO-FI
STORYBOARD



MAPPING
INTERSECTING
PLOT LINES IN TWINE



DRILLING DOWN
TO EXPAND THE
CONTENT

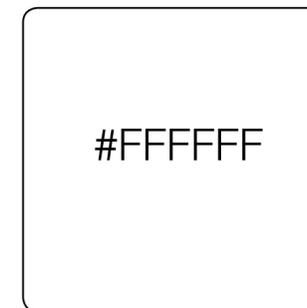
Next, I **created a storyboard** (right). Each tile represents a scene in the story. Color coding represents pages where users make a choice. They also indicate pages that are annotated with rich media, such as videos.

Then I visualized the storylines using Twine software. Spatializing the storyboard this way allows me to **create narrative pathways** that intersect, and build off of users' choices, without broken links or blind alleys.

Once I elaborated the narrative content of each tile (far right), colored post-its allow me to easily keep track of the different plot lines and **customize the content for each player choice.**

7. Building Style Guide

COLOR PALETTE



I created style guides comprising high-readability fonts, color palettes, and simple layout grids to ensure a consistent web design standard and a friction user experience.

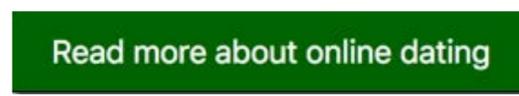
I chose red and klein blue because these colors evoke contrasting emotions: blue evokes coolness and rationality, whereas red evokes passion and risk. Together, these colors evoke the emotional landscape of my subject material.

TYPOGRAPHY

BEBAS NEUE A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

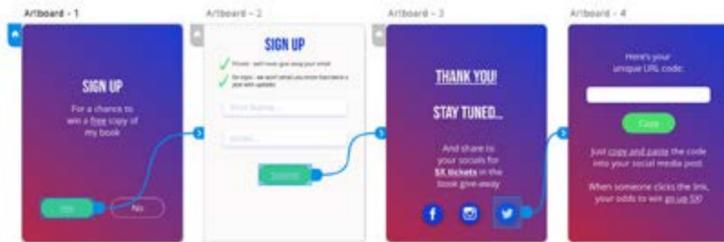
Open Sans A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z

INTERACTIVE AND NAVIGATIONAL ELEMENTS

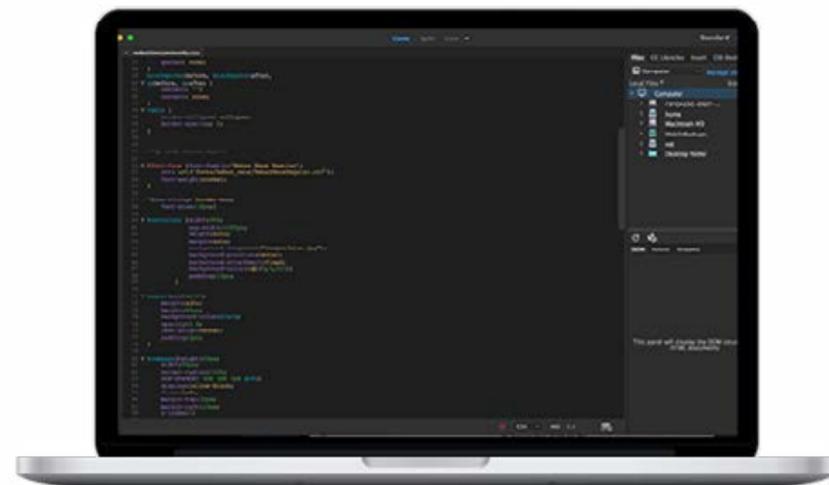


8. Building Deliverables

PROTOTYPING AN
EMAIL LIST FUNNEL



... AS PART OF A MOCKUP
OF THE LANDING PAGE



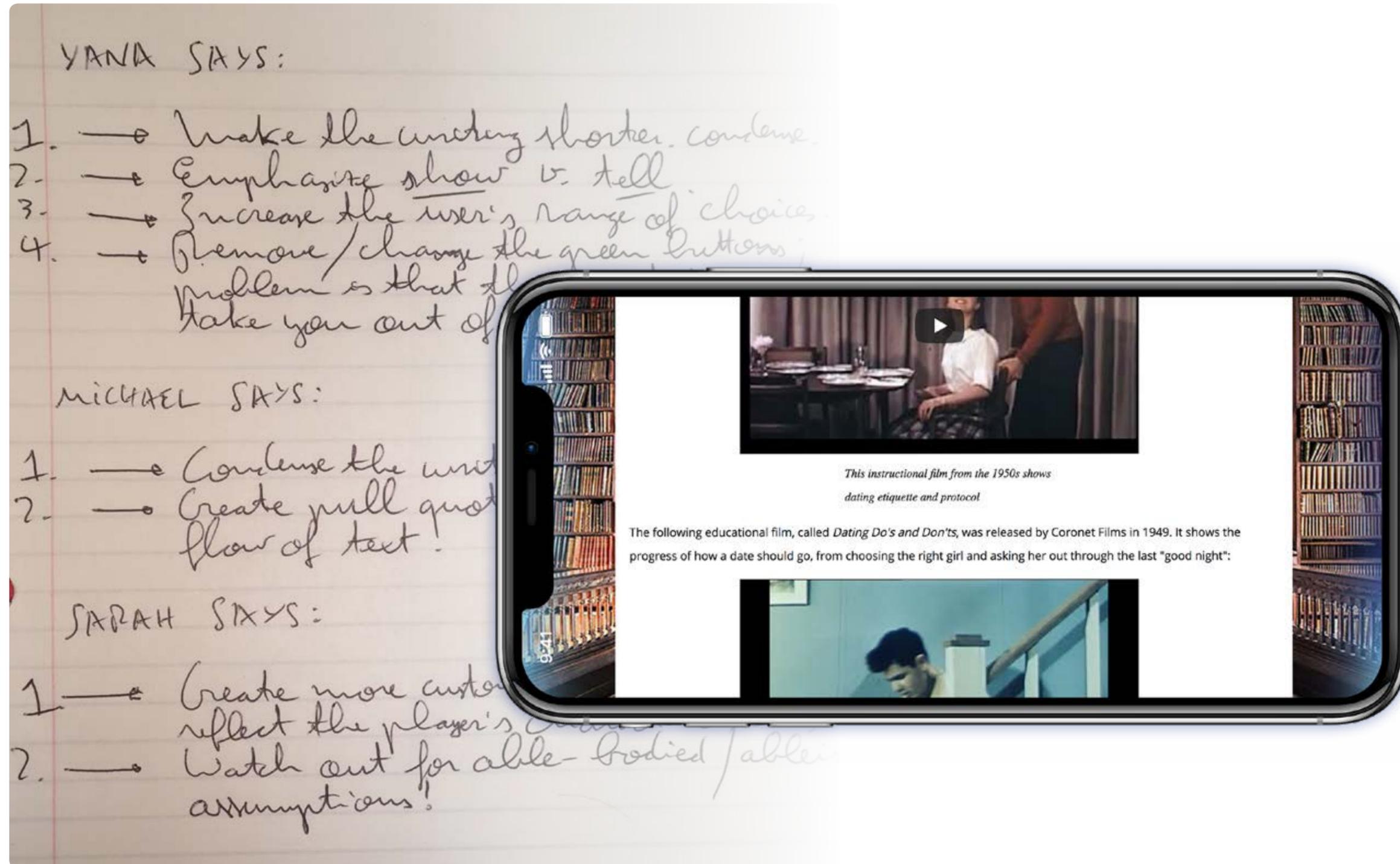
SCRIPTING CSS
RULES

I created sketches, wireframes, and mockups of these site pages.

I also prototyped a sign-up page to collect emails for a potential email newsletter from my readers.

Then I coded the pages and built out the website using HTML, CSS, and javascript.

9. Product Testing



I performed **remote user testing** with 3 different user segments: three young women from a web hosting working group at my university; three men who have participated in seduction communities; and two UX experts.

I also conducted **site performance testing** through **Google Analytics**.

Based on user feedback, I highlighted three areas to optimize the user experience: **copywriting, web accessibility, and narrative customization**.

I **reduced the text** on individual pages; **inserted pull quotes** to reduce information overload; **formatted the images** to increase page load speed; **inserted alt tags to enhance SEO**; and wrote a **whitepaper** to help promote the website through sites like The Good Men Project and Gamasutra.



What is Alumni Aloud?

Alumni Aloud is a podcast by PhD students for PhD students. Through one-on-one interviews, it showcases alumni of the Graduate Center (GC) as they share their professional journeys to help current students navigate the ins and outs of career planning.

How is it unique?

Alumni Aloud seeks to change the value of doctoral education while strengthening the university community. By fostering dialogue between students and alumni, the podcast encourages students to imagine how they can use their skills and training outside the ivory tower by letting them in on tips, techniques and mindsets for the job search.

Roles and responsibilities

Conceptualize the idea, create content and branding, recruit interviewees, perform interviews, edit and produce episodes, coordinate web hosting and cross-platform streaming, conduct user research, and market Alumni Aloud through social media outreach.

1. Define Problem



SKILLS USED:

- INTERVIEWING
- PROJECT MANAGEMENT
- AUDIO EDITING
- MEDIA PRODUCTION
- GRAPHIC DESIGN
- BLOGGING
- SURVEYING
- DATA ANALYSIS



KEY STAKEHOLDERS:

- GC STUDENTS
- ALUMNI
- ADMINISTRATORS



PROJECT TIMELINE:

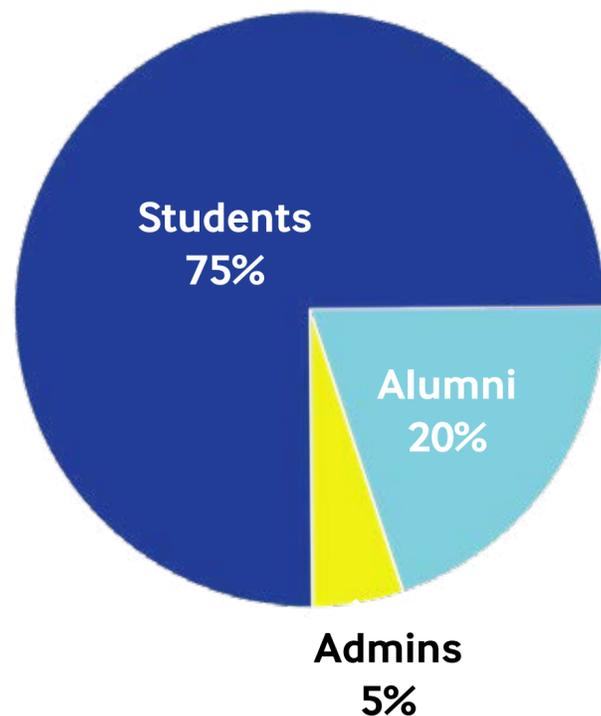
- 24 MONTHS (SEASON 2)

There were 5,891 humanities PhDs awarded in 2015, the highest number ever recorded. Yet academic hiring for humanities PhDs has been declining since the 1980s.

Despite this, PhD programs continue to prepare students for tenure-track academic jobs - **jobs that simply aren't there.**

How might we **teach students about careers** that make use of their skills and talents outside academia in ways that **imbue them with confidence** and a sense of optimism about the future? And how can we leverage these perspectives on professional development to help **build a culture of innovation and public engagement** among PhD students by giving them a platform to share their stories?

2. Determine User Needs



THE DREAMER



Marina, 24, is a second-year student in educational psychology at the Graduate Center originally from Albania. She wants to get exposed to **alternative career paths** early in her training to make the most of her opportunities. “There’s no chance I’m going back to Albania after I finish, and it’s hard to get a work visa here in the U.S., so I need to be prepared.”

We need to build something whose **scope is broad enough** to give Marina a view of many different careers, but also **detailed enough** to know what these jobs are like on a day-to-day basis.

THE CAREER-CHANGER



George, 34, is an alumnus of the Graduate Center. He’s working at the NYC Mayor’s Office for Sustainability as an outreach coordinator for the Spanish-speaking community, but he’s considering a career switch. “I’d love to learn more about what my fellow GC graduates are up to.”

We need something that **features alumni** of the Graduate Center, people whom George can plausibly reach out to for networking and informational interviews.

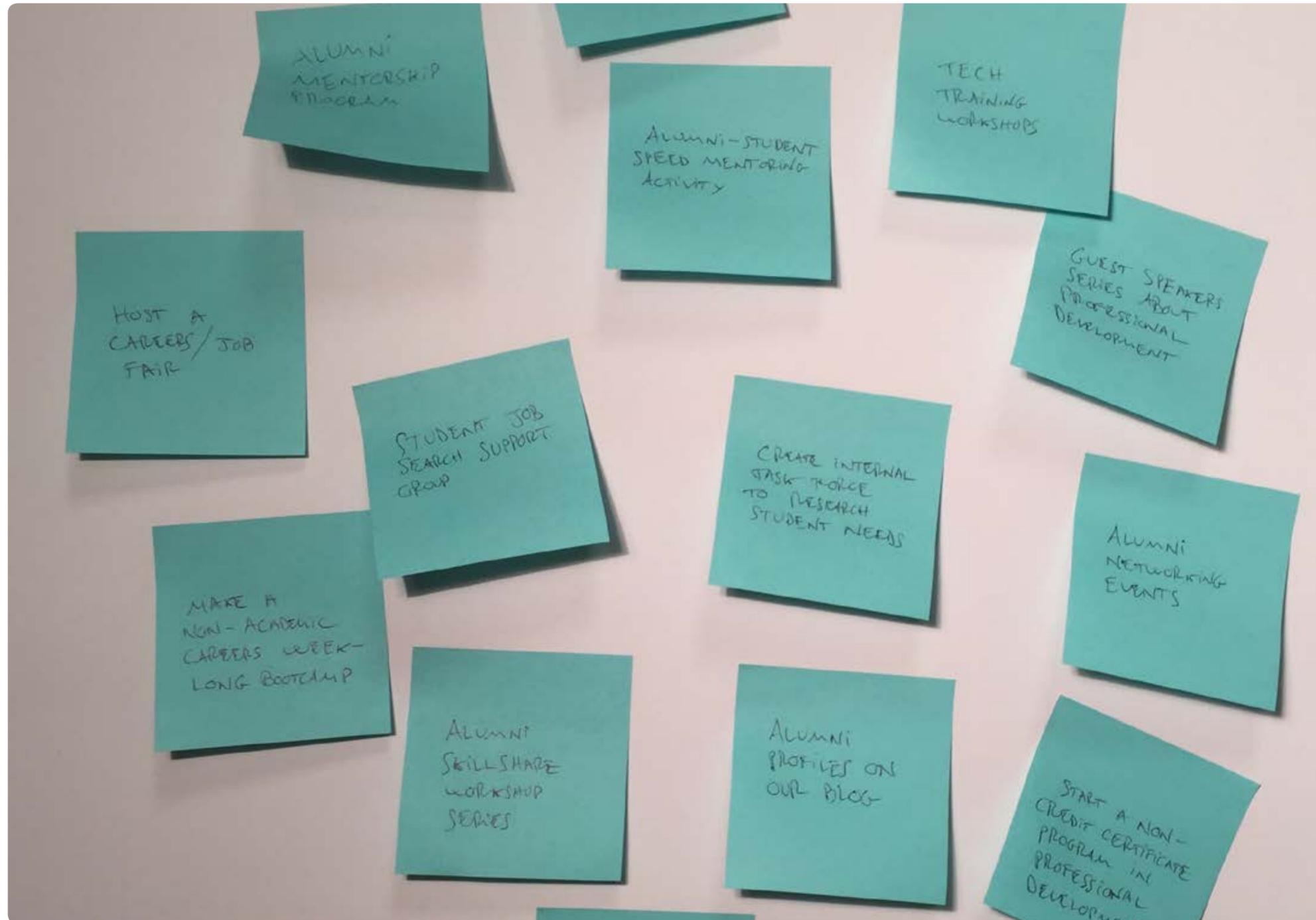
THE ADMIN



Marcus, 49, is an assistant dean at the Graduate Center. He’s aware of the challenging job market for newly-minted PhD’s, and he’s eager to **explore ways to professionalize students** for today’s changing employment landscape. “Anything I can do to help our grads out is music to my ears.”

We need something that **speaks directly to the experience of graduate students**, so administrators like Marcus can get buy-in from his colleagues to start to formulate solutions to change his university’s programs and requirements.

3. Ideate Solutions

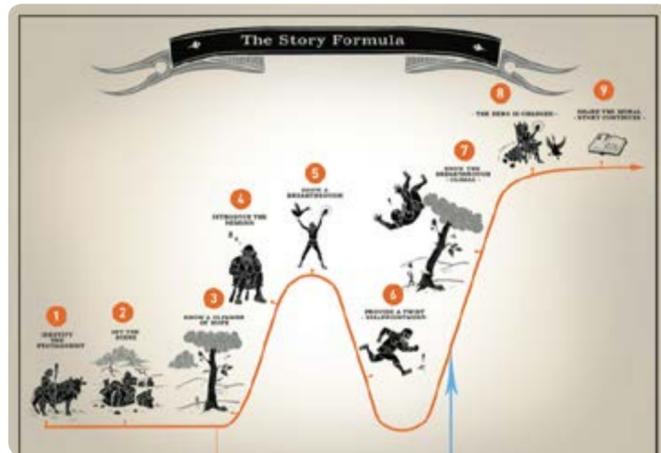


Based on our **brainstorming** session, the idea of creating a podcast series profiling alumni in non-academic careers resonated the most with our mission.

It was broad enough to encompass alumni working in many different careers. It was also **detailed and contextual** enough to be meaningful, because it would focus on specific alumni career journeys in ways that would be relatable to current students' experiences and prompt self-reflection. Finally, unlike our counseling resources, it can be **accessed from anywhere** in the world.

4. Craft Interview Scripts

HOW CAN WE TELL COMPELLING STORIES?



(Image by Jonah Sacks)

WHAT QUESTIONS CAN CREATE THIS FEELING OF DISCOVERY ON A REPEATABLE BASIS?

Intro questions:

- What's your name and what do you do for a living?
- How did you come to do the work you do now?
- Can you tell me a bit about your academic background?

About the job?

- Could you tell us what's a typical day in the office like for you? (if there is such a thing)
- What's the atmosphere like in your workplace?
- What do you wish people knew about your field?
- What do you enjoy most about your job/what do you find rewarding? What are some challenges?
- What are the keys to success in your field?

On career transitions:

- Did you ever see yourself in academia, or did you always know this [current job] was your path?
- What led you away from academia?
- What led you to the field you work in now?
- How far along were you into your graduate studies when you started considering career paths outside the academy?
- What was the decision process like when you were thinking about moving into your new career from academia?
- Was this a hard decision for you? (Or challenge them: "was it really that easy?")
 - Was it scary changing jobs/paths?
 - Was it a big adjustment from life as a graduate student (&/or life in academia) to this job? If so, what was that adjustment like?

What did your job search process look like? What made the biggest difference in your search? And what did the decision process look like when you took a new position?

We faced two main challenges in building our interview scripts: first, **counteracting some interviewees' anxiety** about public speaking and get them to go deep; second, **telling their stories in ways that would be relatable** and inspiring to students who have never met them.

We modeled our interview scripts on the **"hero's journey"** of narrative development.

Opening questions establish comfort by soliciting empirical, easy-to-answer facts.

Later questions probe deeper into interviewees' sense of ambivalence or perception of overcoming challenges.

5. Content Strategy

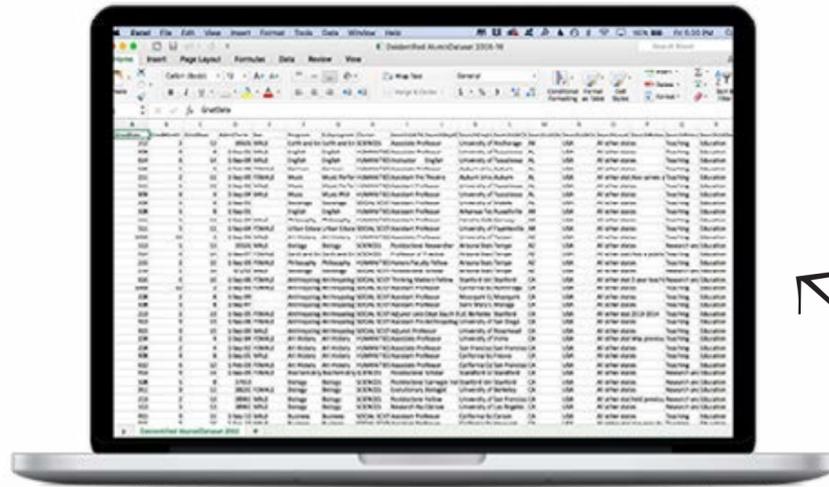
I developed a content strategy to profile a broad range of alumni working in non-academic careers who have graduated in the previous fifteen years.

I sourced interviewees from a database of recent alumni who have graduated from diverse academic departments.

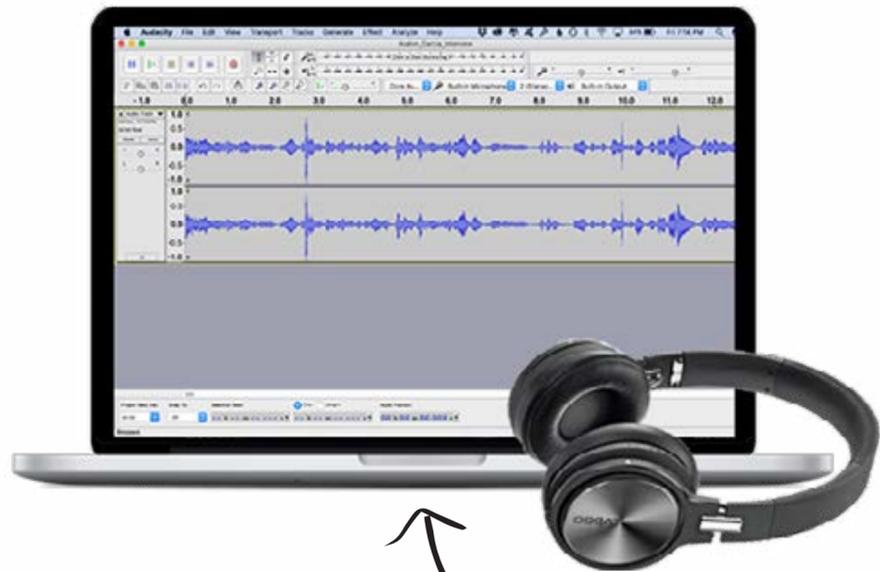
I conducted interviews in my office using specialized recording equipment.

Then, I edited the episode files using Audacity.

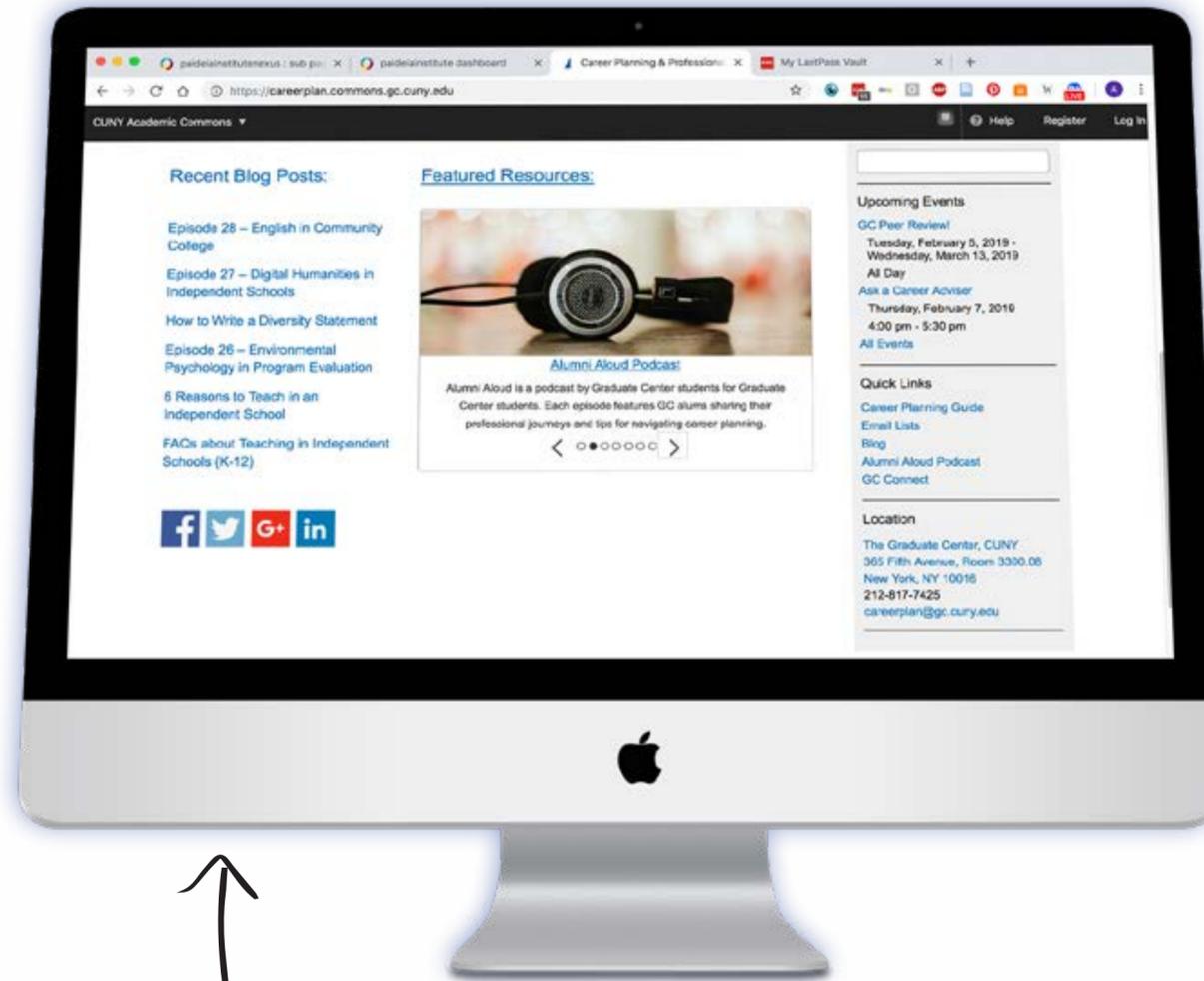
I also implemented the web streaming capability that links individual episodes from an offsite server at archive.org through our website (a customized Wordpress CMS). This way, new episodes are securely stored, and we're able to broadcast them through our blog, social media channels, and Apple Podcasts whenever new episodes are released.



TRACKING ALUMNI CAREER OUTCOMES



EDITING SOUND FILES



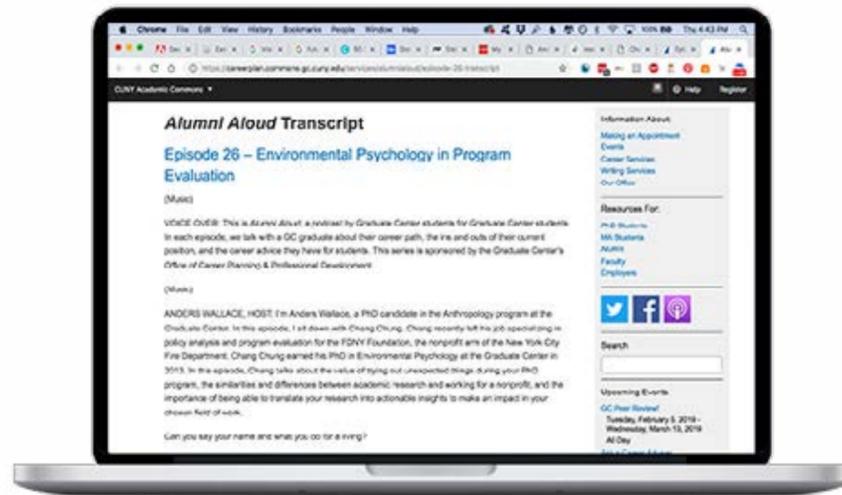
STREAMING EPISODES FROM ARCHIVE.ORG THROUGH OUR WORDPRESS SITE

6. Inclusive Identity Design

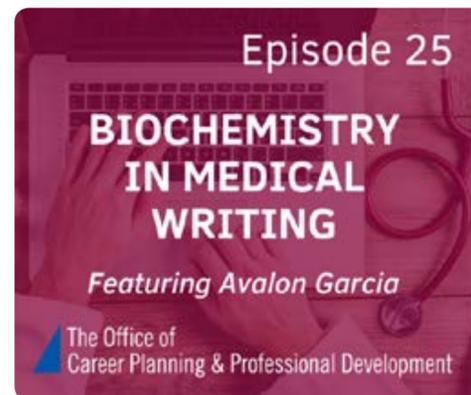
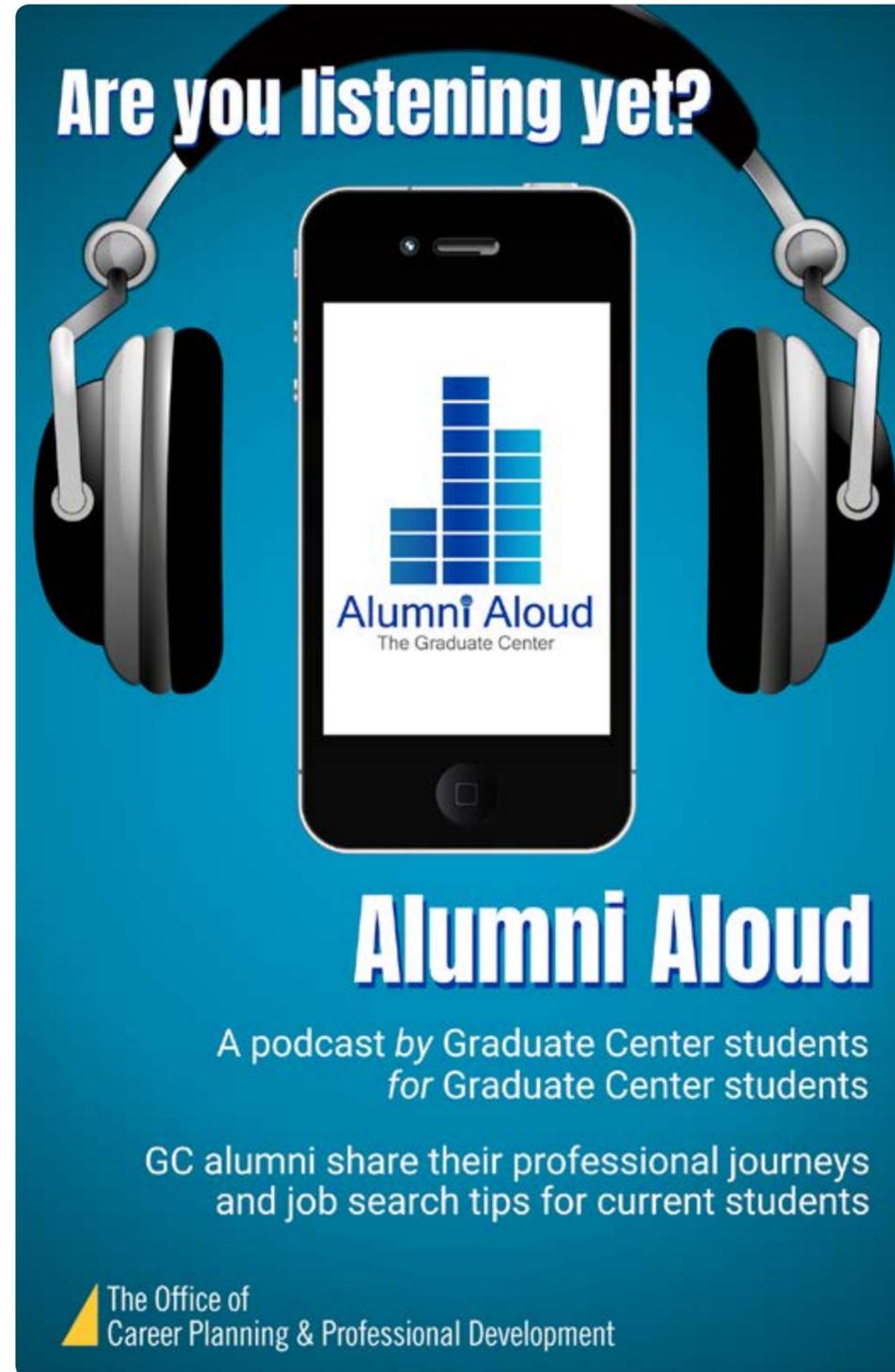
For each recording, I also **created show notes** to boost our podcast SEO via our blog.

I also **proofread episode transcripts** and linked these to our show notes as PDF's, to ensure all episodes are **accessible to hearing-impaired listeners.**

Before our launch, I **created a holistic brand identity** for Alumni Aloud that was contemporary, consistent, and adaptable across different graphic design applications: from blog post headers to promotional posters, Twitter and Facebook posts, icons, and other media.

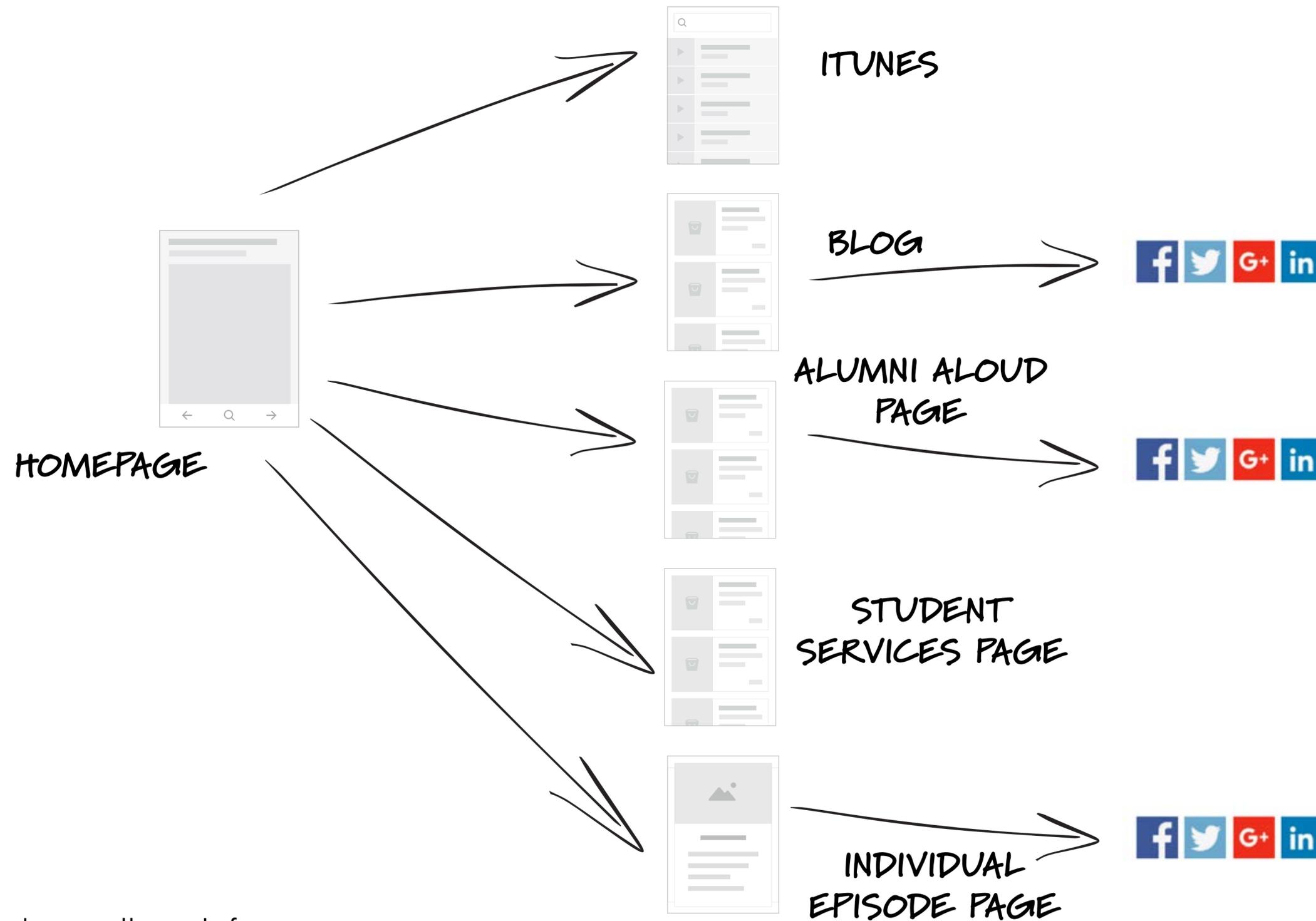


TRANSCRIPTS FOR HEARING-IMPAIRED LISTENERS



SEASON 2 HERO IMAGE

7. Improving Findability



I also collaborated with a colleague and web designer to make Alumni Aloud as findable as possible on our website and from the web.

First, we located five access points for users to get Alumni Aloud from our homepage: a “quick links” button, a carousel slider, a link to newly released episodes via our blog, a link via our “Student Services” menu item, and a direct link to iTunes.

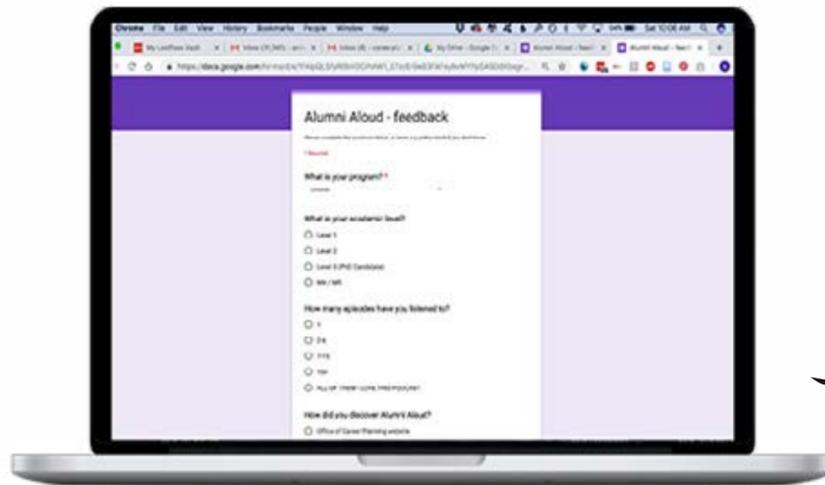
Three of these five access points have social media links for users to share or comment on the show.

8. Research and Iteration

With **syndication via Apple Podcasts** and our blog, the Alumni Aloud team has produced 25+ episodes and the show has been **streamed 3000+ times**.

After our first season, I gathered **feedback from students using an online survey** to gather information about how we could improve their listening experience. To maximize our feedback from a busy student population, the survey uses a simple questionnaire in Google Forms using **likert scales and short responses**.

Survey data will be analyzed to improve the execution of Alumni Aloud and empower our listeners' journey into their future careers.



LISTENER
INSIGHTS
DRIVE
IMPROVEMENT





What is Theseely?

Theseely is an interactive web-based career exploration tool that allows students to explore careers according to the work values, skills, and activities different jobs may have in common.

How is it unique?

Job-search databases like Indeed.com allow students to apply to specific jobs. But what if they don't know whether that job is a good fit for them? Theseely fills a gap in the formative stages of a student's career exploration. By focusing on skills and values that are shared between jobs, Theseely leverages the power of lateral thinking to let users explore jobs they may not even know exist.

Roles and responsibilities

Project ideation and scoping, scraping data from online database, cleaning and compiling data frames in collaboration with a data scientist, visualizing the data, and exporting the data visualization to the web as an interactive program accessible from anywhere in the world.

1. Define Problem



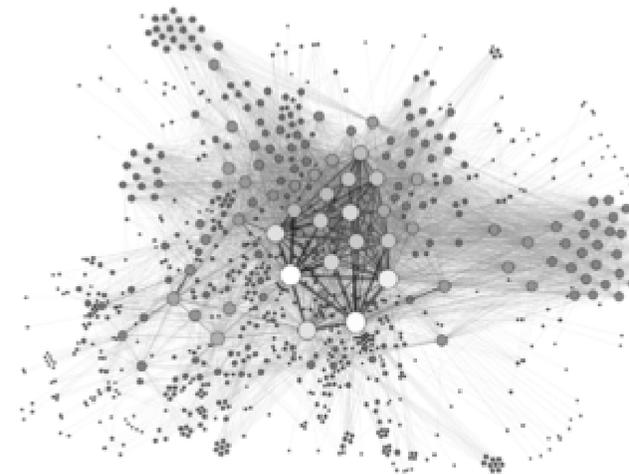
SKILLS USED:

- WEB SCRAPING
- DATA CLEANING
- DATA VISUALIZATION
- WEB DESIGN
- LOGO DESIGN



KEY STAKEHOLDERS:

- GIC STUDENTS
- ALUMNI
- CAREER COUNSELORS



PROJECT TIMELINE:

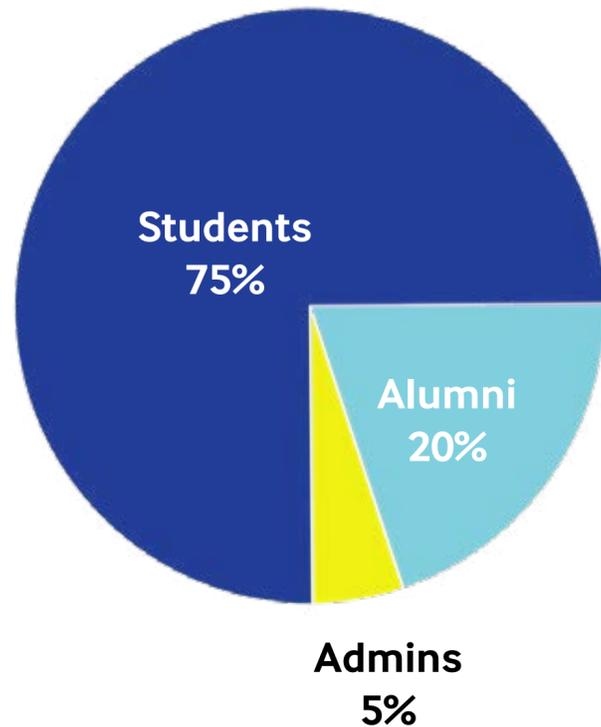
- 2 MONTHS

There were 5,891 humanities PhDs awarded in 2015, the highest number ever recorded. Yet academic **hiring for humanities PhDs has been declining** since the 1980s.

Asking students to think of alternative careers is often counterproductive. They may struggle to envision what career they might like, because they have no way of knowing what the job entails on a day-to-day basis. This inhibits the self-confidence necessary to commit to exploring alternative careers, because many students simply resort to stereotypes as proxies for real understanding (such as, “I don’t like math, so I would hate data science”).

In short, we need a solution that **gives students self-confidence**, rather than sapping it, by instilling a sense that there are many possible **careers that might satisfy a student’s interests, skills, and values.**

2. Determine User Needs



THE INTREPID EXPLORER



Yuki, 27, is a masters student in linguistics at the Graduate Center. She's looking for work that blends her passion for analytic thinking with her love of language. But she's **worried about her job prospects** after graduation. "What else is there besides research?"

I need to build something that gives users like Yuki a low barrier of entry to **quickly and easily discover** new careers.

THE PRACTICAL MOM



Kimaula, 42, graduated five years ago. She's considering a career switch, but she **doesn't want to go back to school.** "I need to find a lateral move that takes advantage of my skills and years of work experience."

I need to build something that **prioritizes skills and abilities,** to let Kimaula know if she's on the right track. Ideally, Kimaula might even **learn** about skills and abilities she didn't even know she already has that she can list on her resume or cover letter. It also needs to be **accessible remotely** to fit Kimaula's busy life.

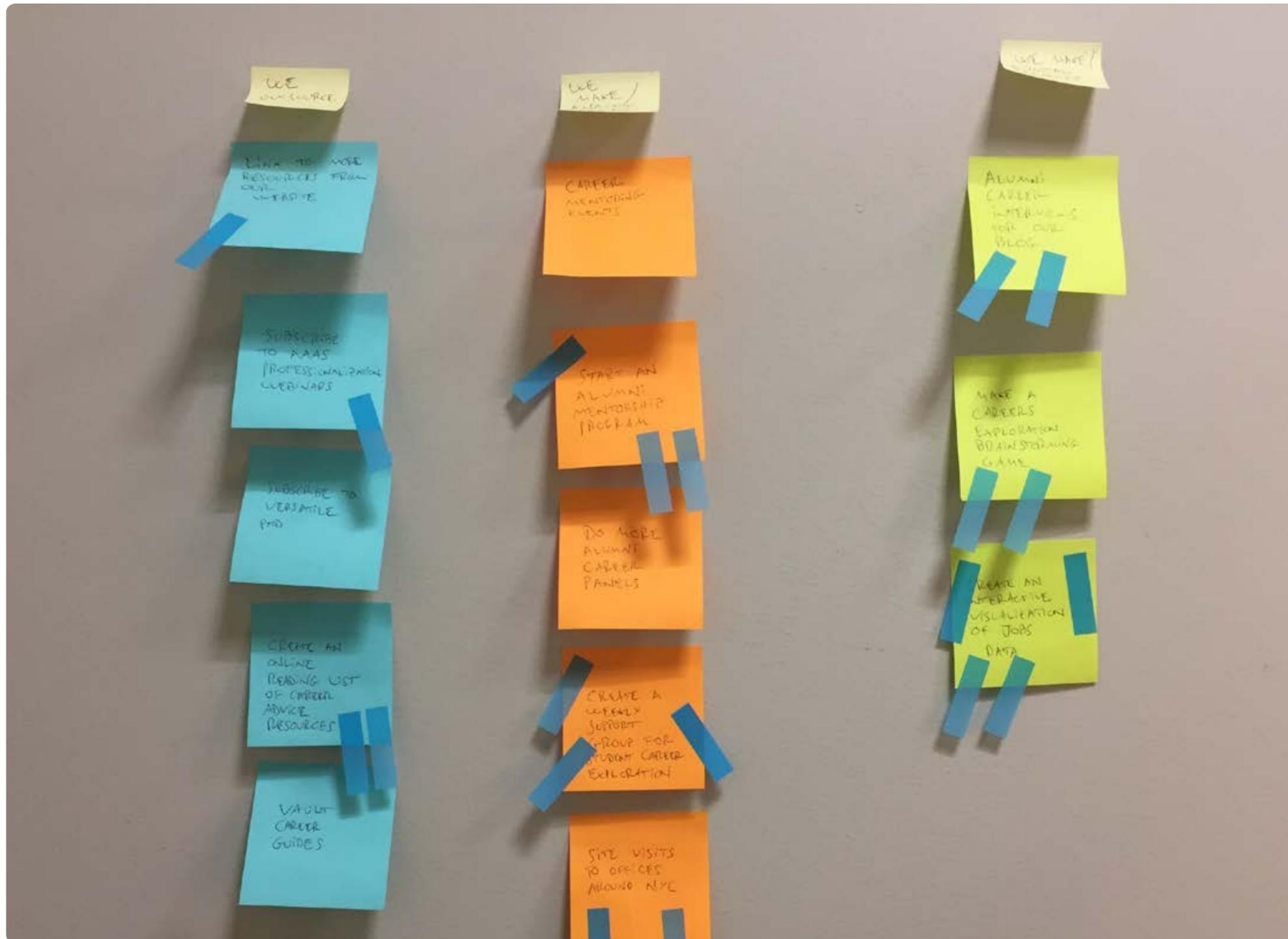
THE SAVVY GUIDE



Vivian, 68, is a career counselor at the Graduate Center. She wants to develop new programs and events that serve students across academic disciplines. "I'd like to come up with **innovative ways to segment my students according to their work values.**"

I need to build something that **prioritizes skills, abilities, and work values** to help Vivian design new training and mentorship events.

3. Ideate Solutions



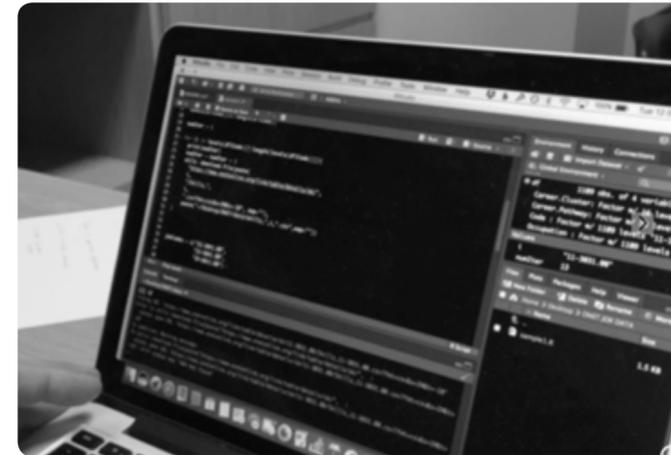
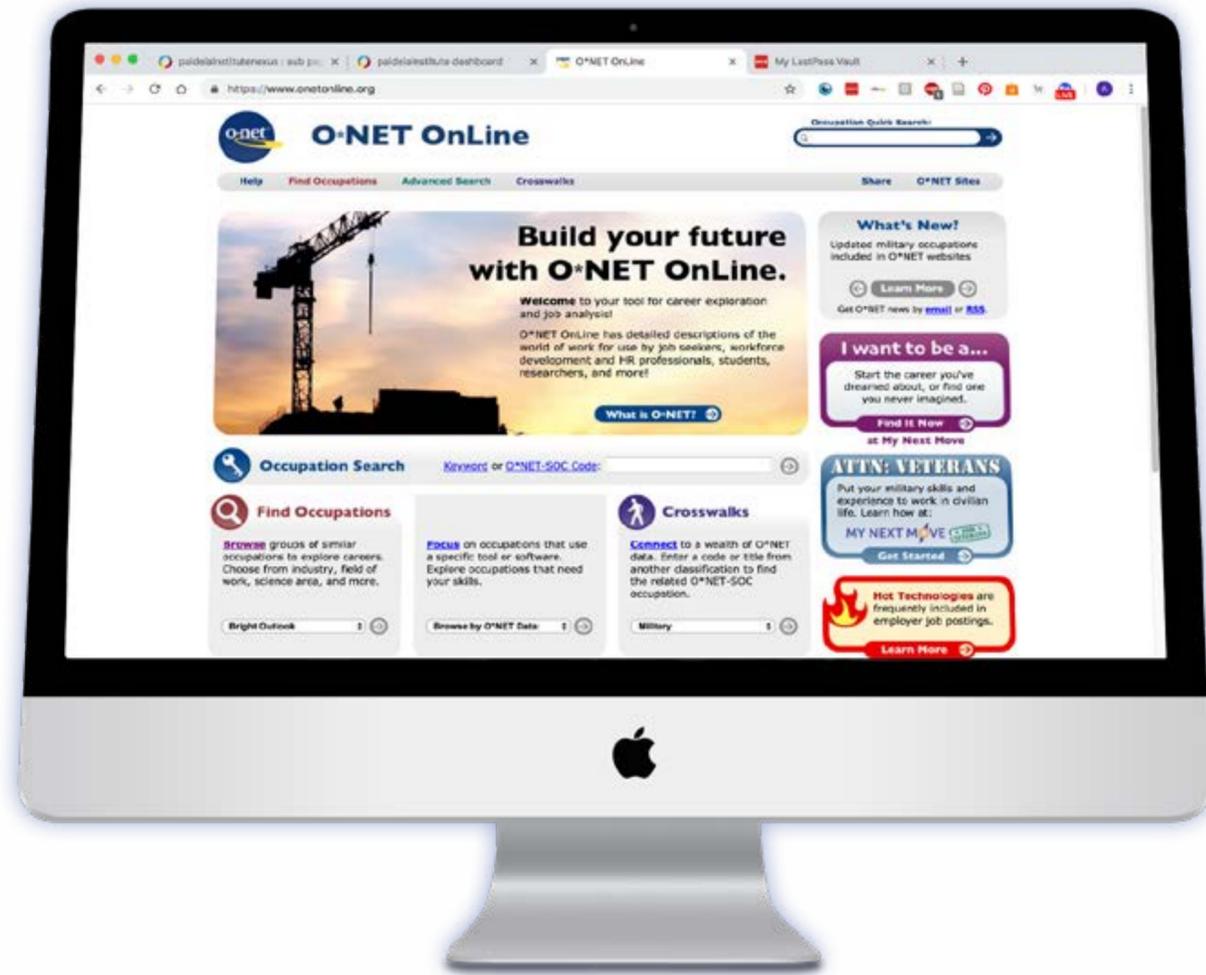
After using **affinity diagramming** to brainstorm and group possible solutions together based on their **user value proposition**, the seven members of our team at the Office of Career Planning and Professional Development voted by assigning three stickers each to their favorite ideas.

Creating a data visualization received the most votes because it met our users' needs in an innovative way: visually engaging, accessible, potentially interactive, exploratory, and able to prioritize objective skills, abilities, and work values for any given career.

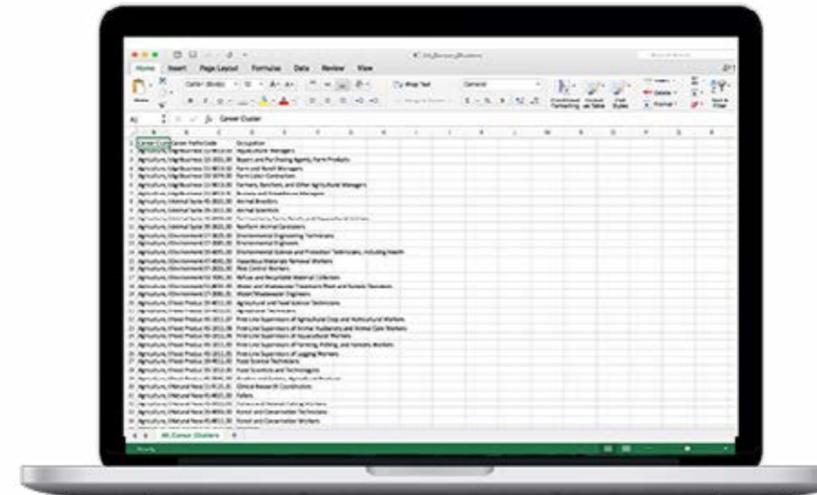
4. Cleaning Data

FINDING THE DATA IN "ONET"

SCRAPING THE DATA IN R



COMPILING THE DATAFRAME



Collaborating with a **statistician**, I used the **programming language** to scrape **jobs data** from onetonline.org.

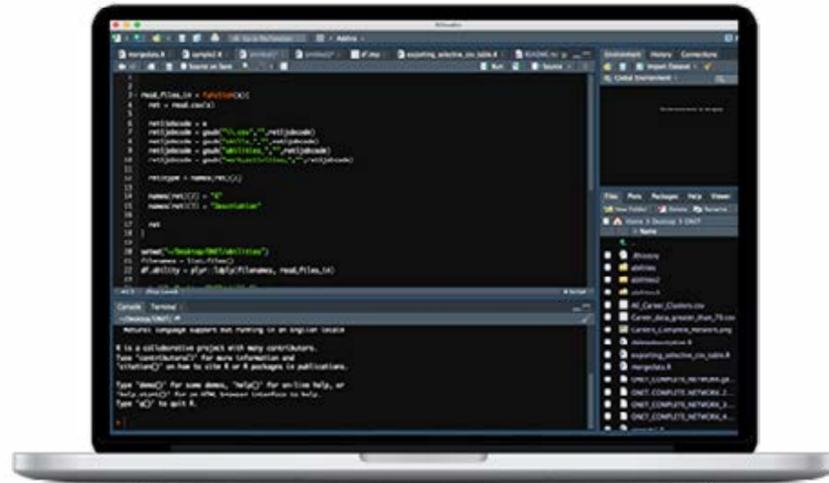
ONET is a government-sponsored database of almost 1,000 different occupations indexed by overlapping variables.

5. Data Visualization

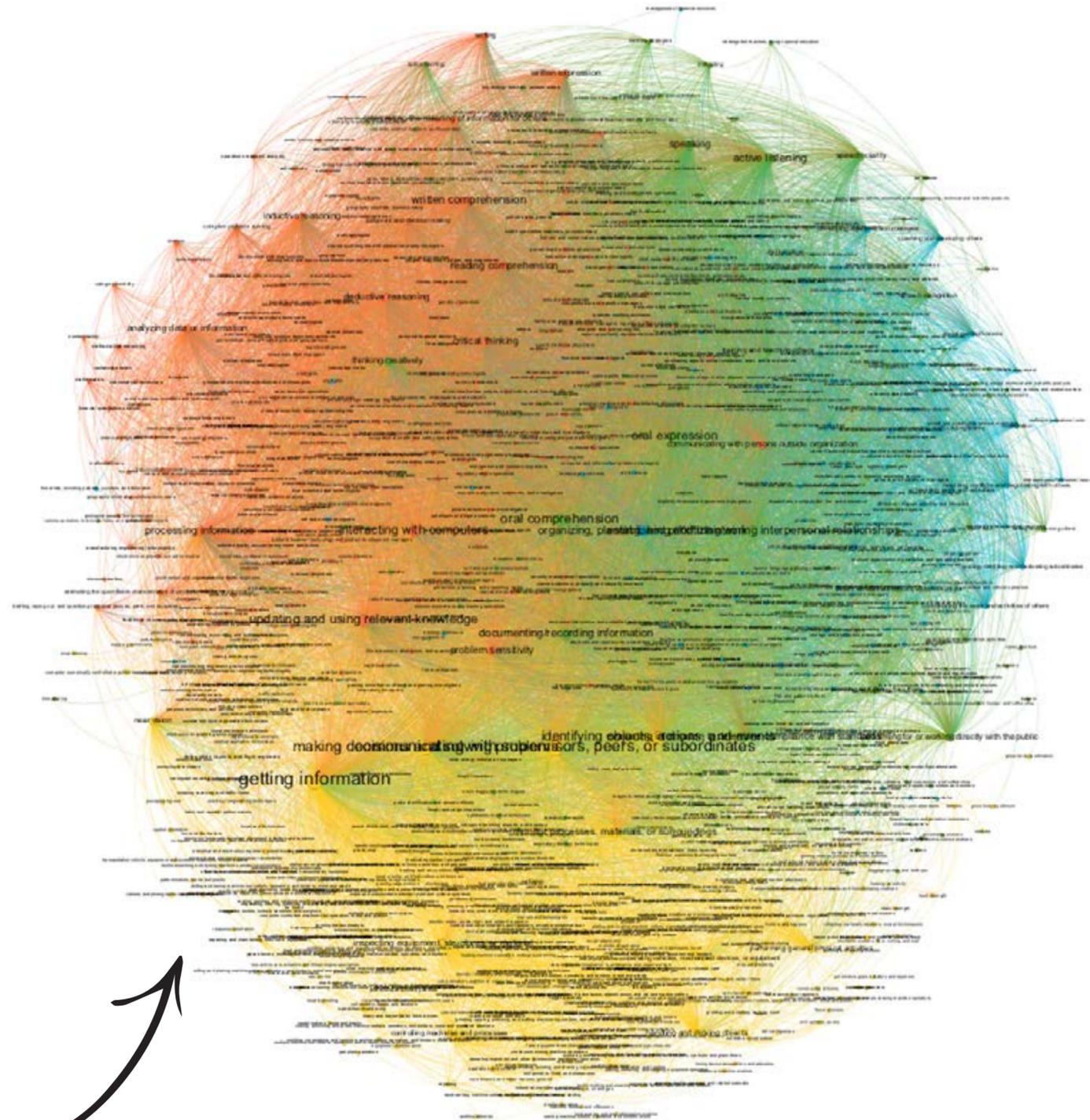
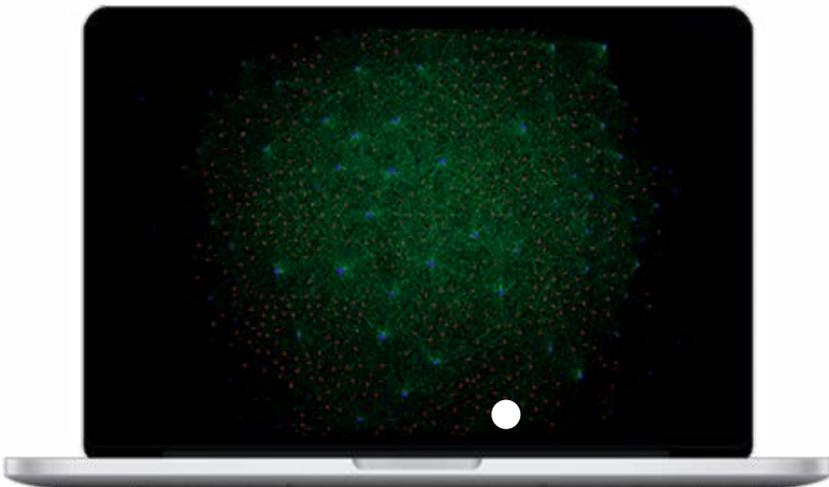
We cleaned, refined, and compiled over 120,000 lines of data using R.

Next, I used the Gephi software package to visualize the data as a network made up of different jobs. The power of the network visualization is that it shows these jobs as proximately linked to each other based on the number of skills, values, and work abilities they share in common.

To enhance the user experience based on the needs of our target audience, I customized the visualization by removing all skills from the database that were not relevant to PhD students.



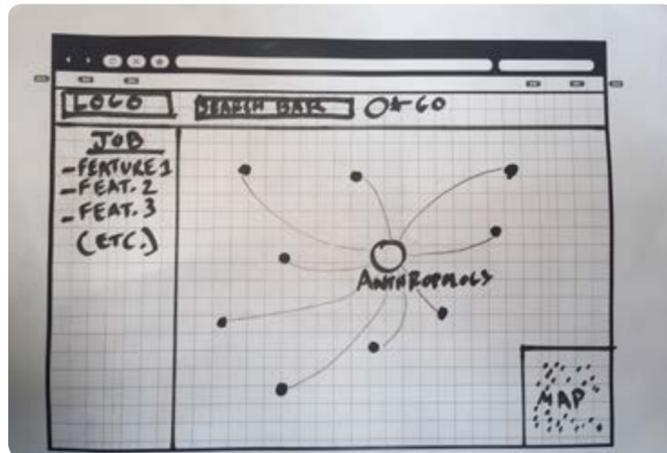
CLEANING CODE
IN R



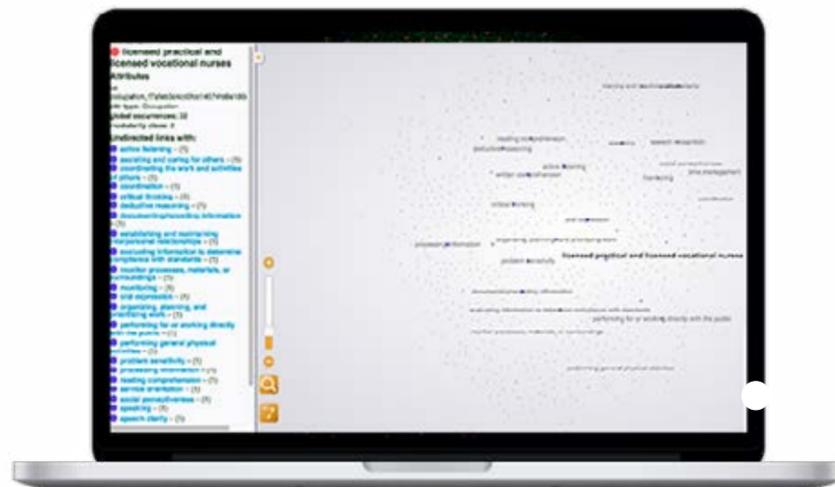
DATA VIZ IN
GEPHI!

6. Web Design Beta

LO-FI WIREFRAME OF THE WEB INTERFACE



CREATING
MOCKUPS...



AND GOING LIVE!



I created wireframes and mockups to prototype the final design of the site.

I exported the data visualizations from Gephi into an interactive website using HTML, CSS, and a customized Javascript codebase. Students can now access and interact with it from anywhere in the world.

The website has two other UX advantages. First, users can explore jobs inductively. This leverages the human brain's capacity for understanding networks through what cognitive psychologists call spreading activation. Alternatively, users can search deductively, by typing a job or skill into the search bar and viewing all of the linked skills or jobs that are associated with their search term.

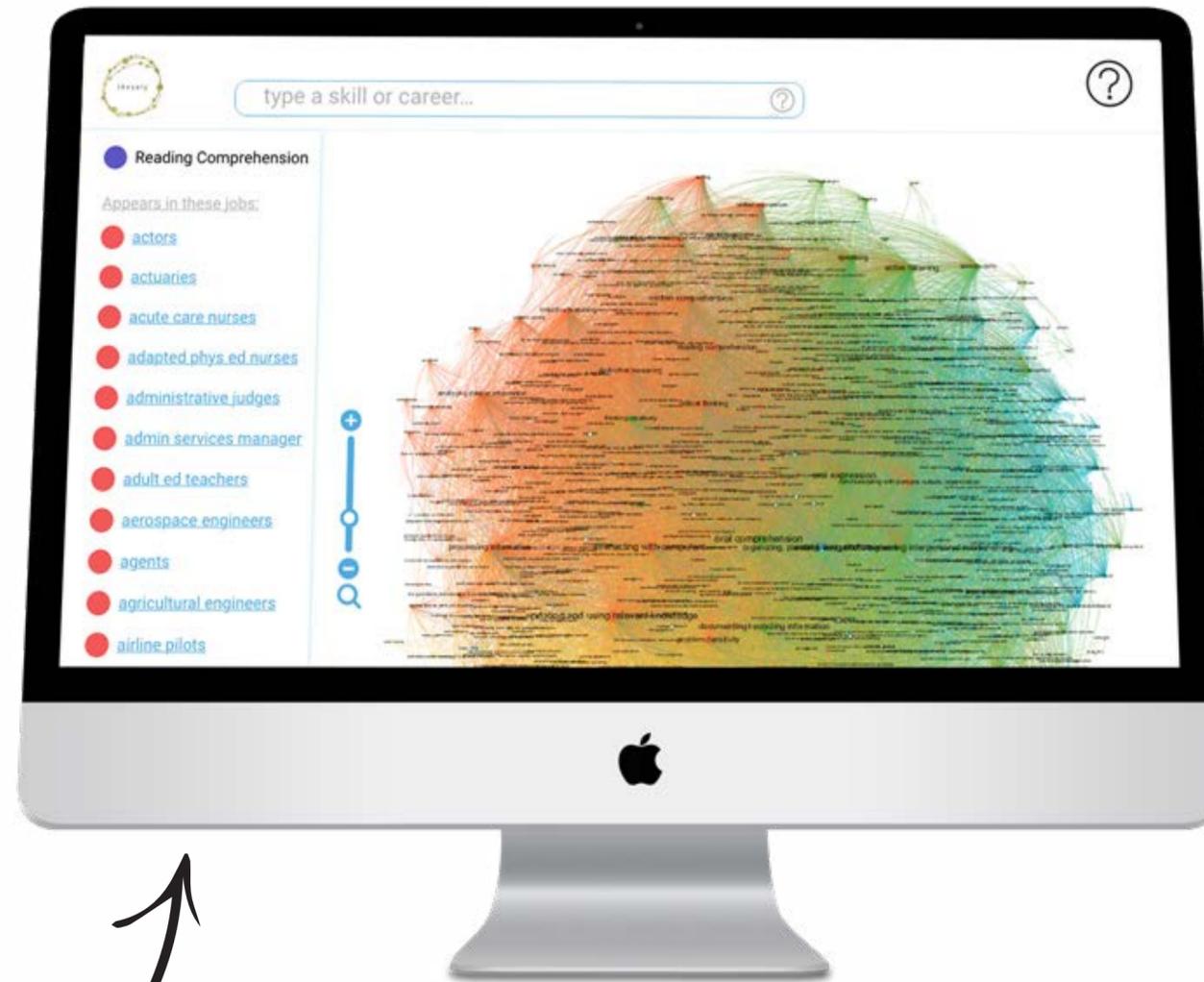
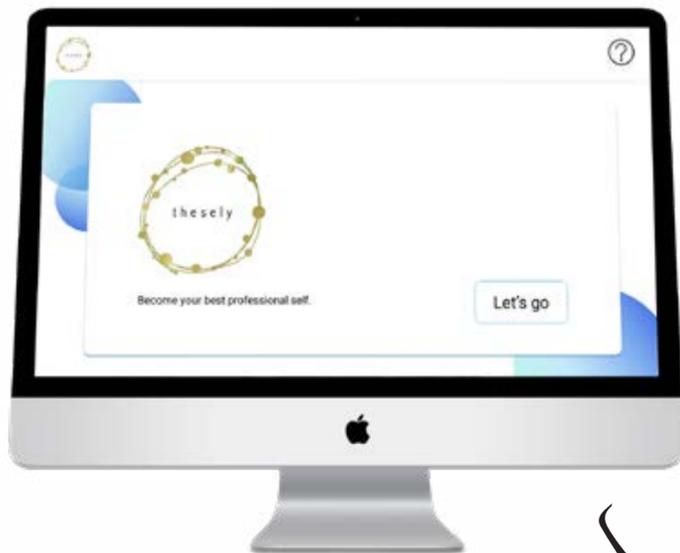
A magnifying glass icon activates a zooming function that increases the legibility of node titles as students explore the network.

7. Testing and Iterating

RAY AND ERIN FROM THE PUBLIC HEALTH M.A. PROGRAM



↓
PROTOTYPING A NEW
LANDING PAGE



↻
AND CREATING A BETTER USER
EXPERIENCE

I recruited five students at the Graduate Center from different departments to **perform usability testing and cognitive walkthroughs of the site.**

I **sorted feedback** to identify three areas for improvement.

Based on this feedback, my next steps are to improve:

- **Creating a new landing page** that invites users into an **experience of career and self-discovery.**
- **Building HTML links** that take users from individual jobs to the corresponding job page on ONET.org to provide more information and functionality.
- **Creating a help page** that explains the project and user interface to new users.



What is Bandaide?

Bandaide is a medical chatbot that allows doctors to encourage mindfulness and positive behavior modification around rehabilitation by introducing holistic, non-addictive treatments for patients dealing with pain.

How is it unique?

Applications like Your MD, Sensely, Florence, and Ada Health allow for customizable therapy plans. None of these services is accessible across platforms or integrated into existing electronic health record systems; and none of them fosters non-addictive therapies - from mindfulness to visualization, movement therapy, and sound therapy - that are proven to help lower pain and to be non-addictive.

Roles and responsibilities

Research, developing user pathways, prototyping interaction design affordances, building content deliverables, narrating voice-over scripts.

1. Define Problem



SKILLS USED:

- RESEARCH
- AFFINITY DIAGRAMMING
- JOURNEY MAPPING
- PROTOTYPING
- VIDEO PRODUCTION
- NARRATING



STAKEHOLDERS:

- HOSPITAL OUTPATIENTS (AND THEIR FAMILIES)
- DOCTORS
- HOSPITAL ADMINISTRATORS



PROJECT TIMELINE:

- 2 DAYS

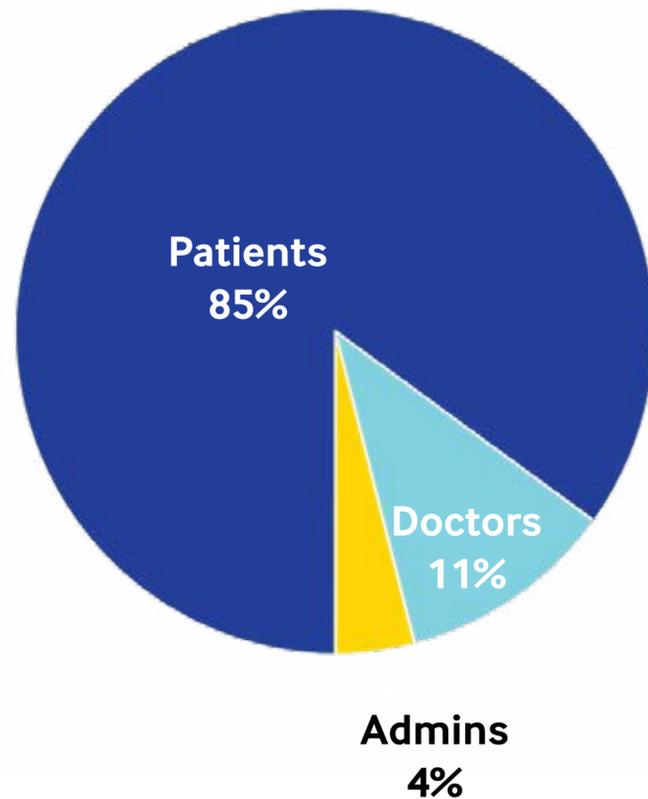
Let's talk numbers. There were 191 million opioids prescribed in the U.S. in 2017. This causes an estimated \$504 billion in economic costs, \$41.8 billion in lost productivity, \$7.7 billion in criminal justice costs, and over \$6 billion in additional child and family assistance spending.

The social, economic, and personal costs of over-prescribing opioids to treat pain are exacerbated by doctors who don't have enough time to educate patients or discuss non-addictive alternative therapies.

Because poorly controlled pain leads to addiction and other physical side-effects, the U.S. government now requires doctors to provide tailored education to patients on risks and alternatives to opioid use.

2. Determine User Needs

THE
GRANDDAD



Francis, 79, is a grandfather whose **kids live across the country**. He recently received a hip replacement. His doctor would prescribe oxycodone, except Francis has kidney damage. In addition, Francis's doctor is worried about the addictive potential of prescribing opioids.

We need to create something that **educates** older men like Francis about **alternative pain therapies**. Additionally, it needs to be **accessible for older people**, like Francis, who aren't smartphone-savvy.

THE
DOC



Tom, 57, is Francis's doctor. He's rushed, and **doesn't have the time to educate** Francis on alternative pain treatments and how to install healthy lifestyle behaviors to help him manage his pain. Tom would like some way to **send Francis reminders** about therapies he can try.

We need to create something that is **responsive and customizable** to Tom's patients' individual needs.

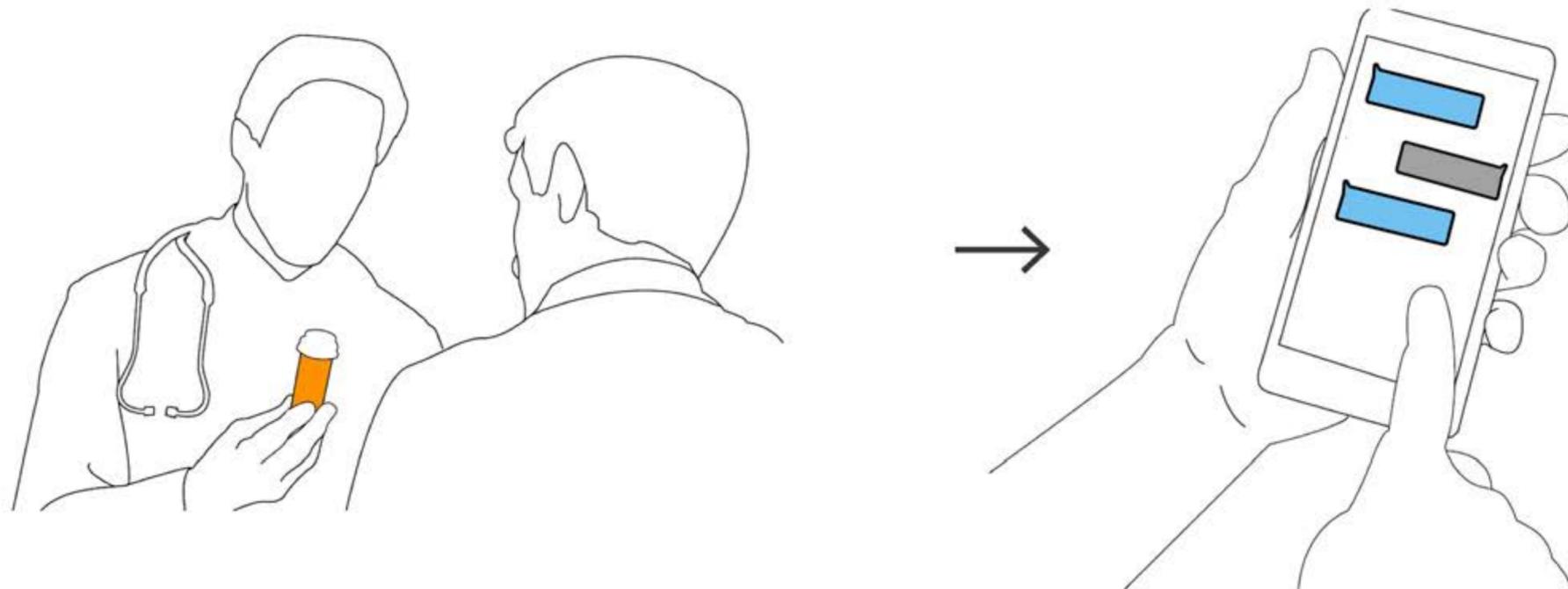
THE
OVERTASKED
STAFFER



Anne, 38, is a hospital administrator. The government is now tasking her with **enforcing patient education** around opioids across all hospital units. Yet **patients have different pain management needs**. Also, government regulations place strong **restrictions on Anne's ability to collect data** about her patients' needs outside of their doctor visits.

We need to create something that is **scalable**, that **integrates** into the hospital's electronic health records database, and that **doesn't collect patient data**.

4. Converge



bandaide

(PROTOTYPE FOR
BANDAIDE SPLASH PAGE)

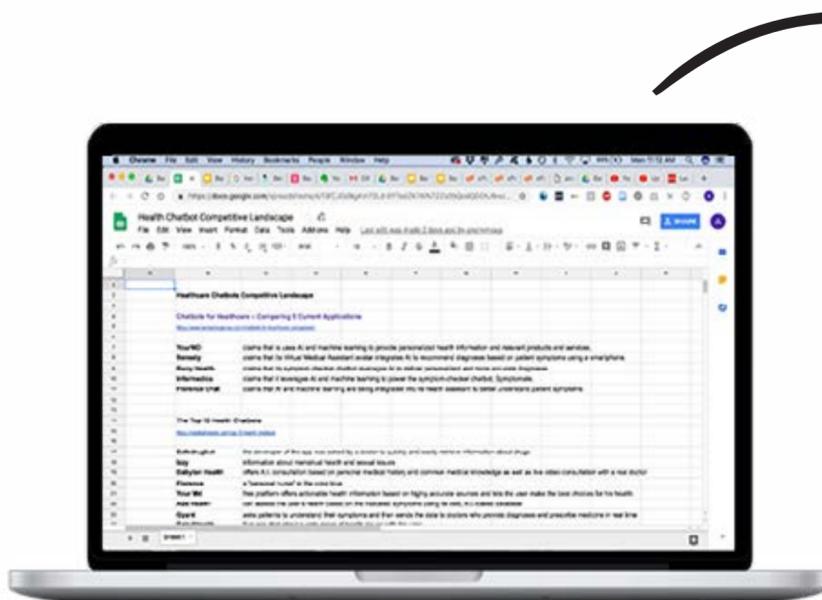
Our solution needs to be customizable, safe, low cost, scalable, accessible for older adults, and capable of providing better measurable health outcomes.

We hit on the idea of Bandaide, a [text message-based pain management chatbot](#). Bandaide integrates with health records and gives patients reminders, support, access to a broad library of alternative pain therapies (including sound therapies, visualization exercises, and movement exercises). It also links patients to third-party services that can make their pain management easier. Bandaide is fully customizable to each patient's symptoms and treatment plan.

5. Assess Marketplace

To define the market opportunity and business plan for Bandaide, we performed research on the competition.

We researched the competitive landscape of healthcare chatbots. We catalogued their offerings, core functionality, affordances, as well as their competitive advantages and liabilities.



DISCOVERING AND EXPRESSING OUR PRODUCT'S UNIQUE SELLING POINT (USP)

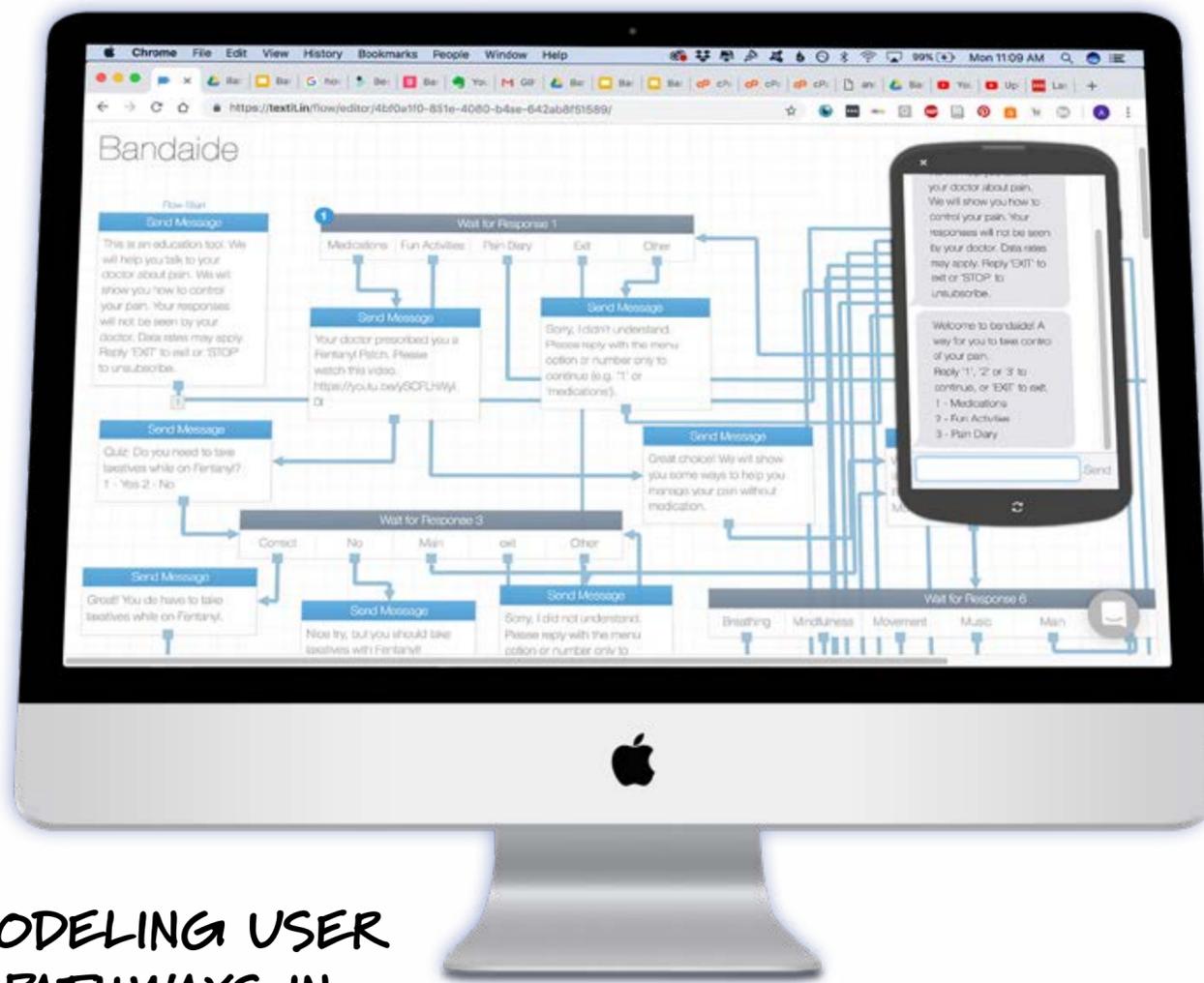
	bandaide	Your MD	Sensely	Florence	Ada Health
Tailored	+	+	+	+	+
Mindfulness	+	-	-	-	-
Cross Platform	+	-	-	-	+
Integrated EHR	+	-	+	-	-

6. Prototype User Flows

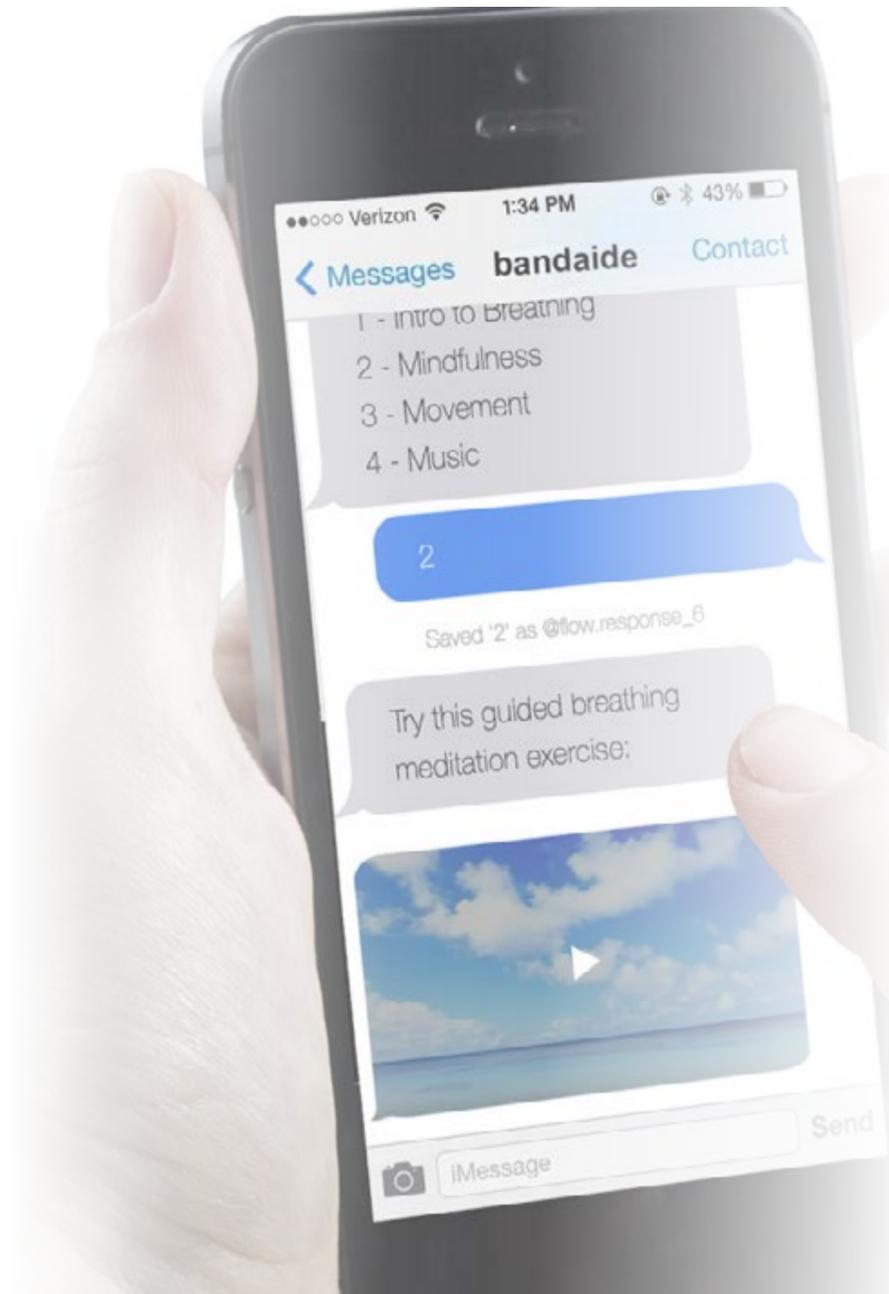
To **build a working prototype** of Bandaide, we modeled fully **interactive user pathways** using the online chatbot prototyping software textit.in.

This chatbot is able to interpret not just semantic and numerical feedback, such as words and numbers, but also emoticons.

By functioning as a chatbot rather than an app, Bandaide remains accessible to as many users (from tech savvy to not) as possible.



MODELING USER
PATHWAYS IN
TEXTIT.IN



6. Polish Interaction Design



To keep users engaged, Bandaide uses basic **gamification** to provide patients with a sense of **accomplishment and personal growth**. It does this by visualizing the user's positive feedback to the text prompts as a flowering tree, which turns into a garden over time.

The tree creates a simple but **powerful conceptual model of good health** whose growth is aligned with users' own rehabilitation goals. Patients can also choose to share their garden with loved ones, to keep them up-to-date on their progress, in ways that **encourage patients to commit and follow through** on their treatment plan.

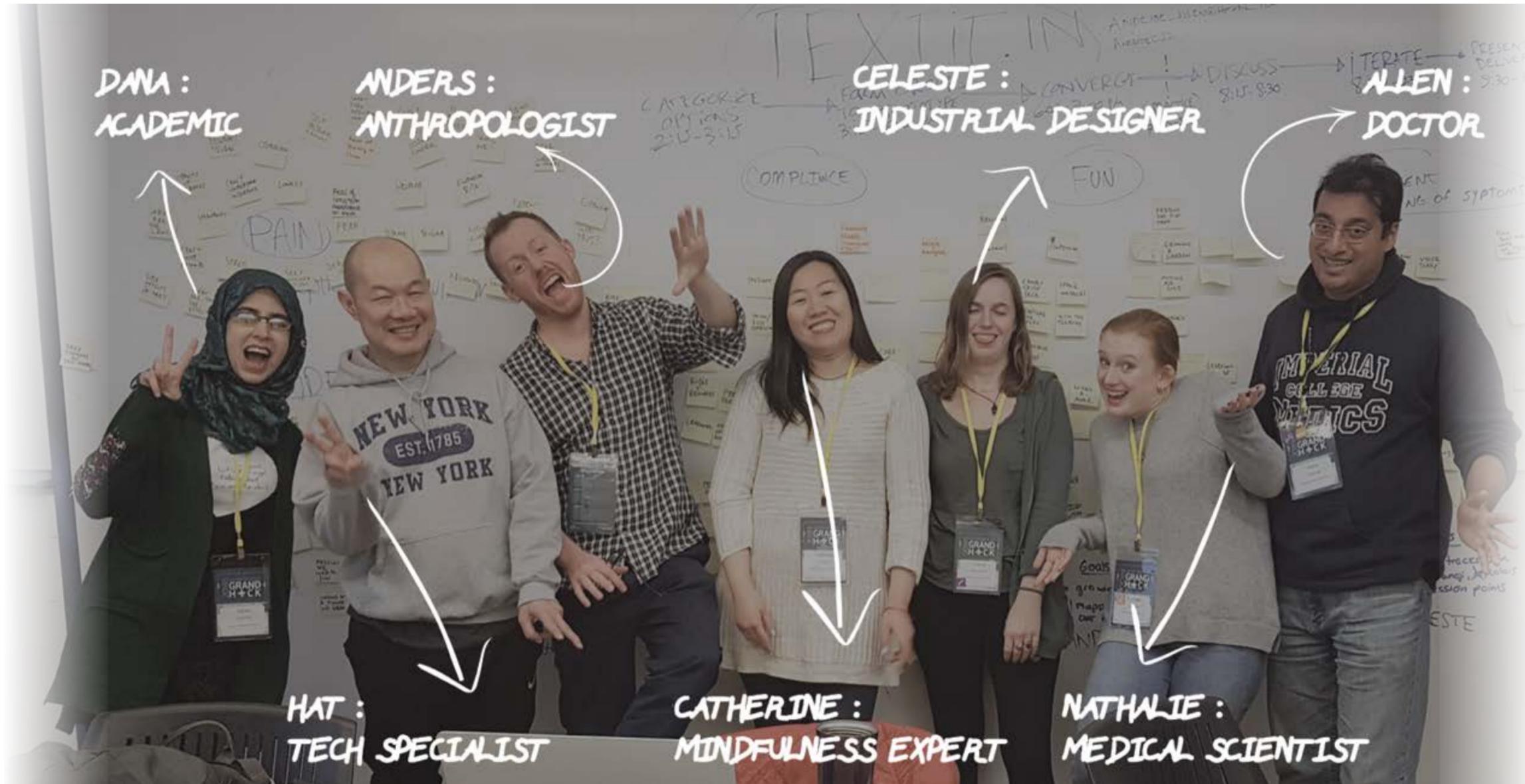
Finally, Bandaide sends the visualization as a GIF that is **not stored locally** on users' phones, meaning it is accessible to a broader spectrum of users.

7. Present to Stakeholders

The Bandaide team used **rapid prototyping** to build and present a working deliverable within 36 hours.

We presented Bandaide to a panel of doctors, service designers, medical students, and entrepreneurs at the cutting edge of healthcare innovation in New York.

Work is underway to **build out the prototype** for small-scale trials at Mount Sinai hospital in New York.



DANA :
ACADEMIC

ANDERS :
ANTHROPOLOGIST

CELESTE :
INDUSTRIAL DESIGNER

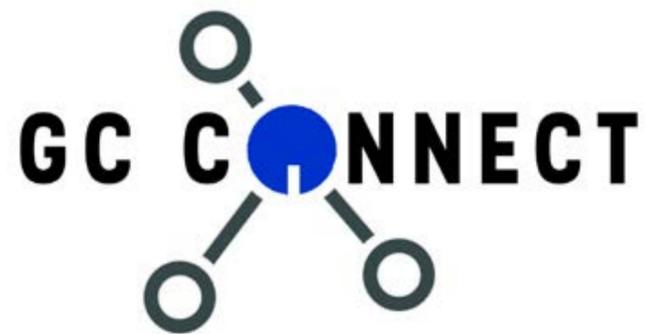
ALLEN :
DOCTOR

HAT :
TECH SPECIALIST

CATHERINE :
MINDFULNESS EXPERT

NATHALIE :
MEDICAL SCIENTIST

GOOD TEAMWORK
MAKES WORK FUN...



What is GC Connect?

GC Connect is a web platform at the Graduate Center that consolidates job search functions - from networking to applying to jobs, exploring careers, and scheduling appointments - to create a streamlined experience for GC students.

Why is it different?

After conducting focus groups with GC students, we realized that students wanted more sustained access to professional development opportunities starting from day 1 of their graduate training. GC Connect represents the next step in the evolution of the Office of Career Planning's mandate to serve students through a range of channels, including digital experiences that educate, enlighten, and delight students at the most diverse urban university in the U.S.

Roles and responsibilities

Focus group facilitation, user experience research, usability testing, and design deliverables.

1. Define Problem



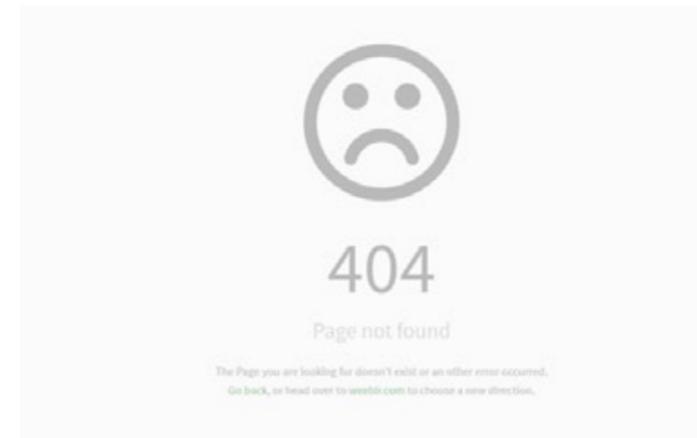
SKILLS USED:

- USABILITY TESTING
- AFFINITY MAPPING
- SYNTHESIZING INSIGHTS
- INTERFACE DESIGN
- STORYBOARDING
- VIDEO PRODUCTION
- GRAPHIC & LOGO DESIGN



STAKEHOLDERS:

- GC STUDENTS
- EXTERNAL EMPLOYERS
- GC CAREER COUNSELORS



PROJECT TIMELINE:

- 4 WEEKS

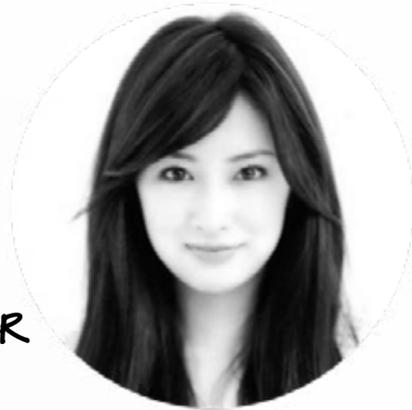
Until GC Connect, the Office of Career Planning offered student services that were **unevenly distributed, hard to access, and required considerable institutional overhead** to coordinate. Many of these services were scheduled by one person, which created a bottleneck in our ability to deliver services to our students quickly and efficiently.

The office recently contracted a content management system provider, Symplicity, to help streamline its offerings to students all in one place. At first, there were technical challenges on the back-end to migrate student data into our Symplicity environment, which we branded GC Connect.

Another problem was even more pressing: **low adoption rates among students.** Why were so few people logging on?

2. Determine User Needs

THE
SAVVY
JOB-SEEKER



Yuki, 27, is a masters student in linguistics. She's gone to as many professional development events as she could manage over the past five years to help her prepare for a dicey academic job market. She's **excited about having all her job search information stored and easily accessible** from the cloud. "I can't wait to create my profile!"

We need GC Connect to provide frictionless **customizability** to power users, like Yuki, who want to make the most of this new service.

THE
SKEPTIC



Nick, 34, is a hiring manager for a biotech startup. He **wants to recruit** cutting-edge biologists with PhD's. He'd like to recruit at the Graduate Center, but **feels skeptical that posting something on the job board will** get noticed. "Sounds like it could be a waste of time," Nick says. "I prefer to connect people with a more personal touch."

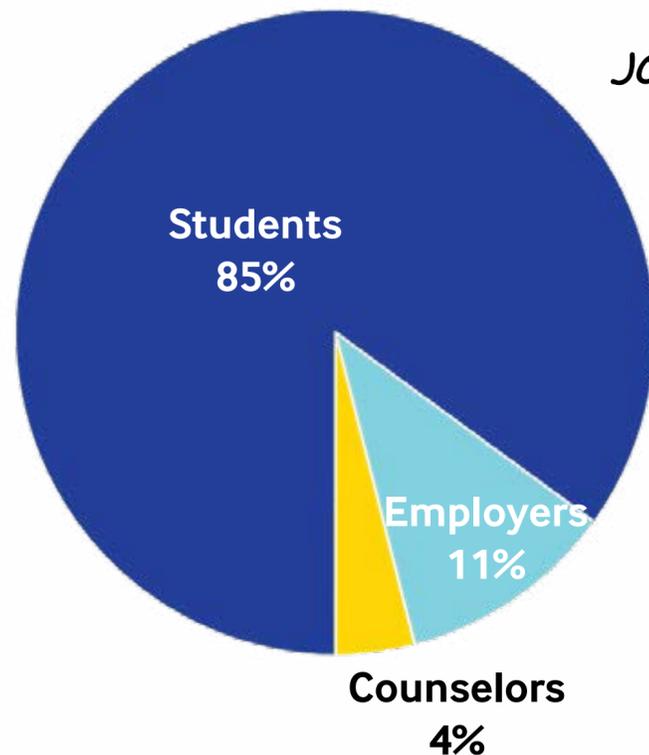
We need GC Connect to feel **safe, intuitive, and helpful** to use, to allay Nick's fears and make it **easy for his job posts to get seen.**

THE
BELEAGUERED
COUNSELOR



Vivian, 68, has been a career counselor at the GC for six years (since its inception). She's **worn out from all the effort it takes to manually schedule** student appointments and retrieve records from old email attachments. She worries that she'll still receive the usual deluge of phone calls and emails from students who don't know about GC Connect. **"How do we get people to sign up for this?"**

We need GC Connect to be **efficient and effective** to use, so students won't have to deluge Vivian with energy-sapping requests.



3. User Research

At the outset, I **facilitated focus groups** with GC students aimed at discovering how they imagine the university could better position them for success in their professional lives in the 21st Century. This led to adopting Symplicity (later GC Connect) as our online student portal.

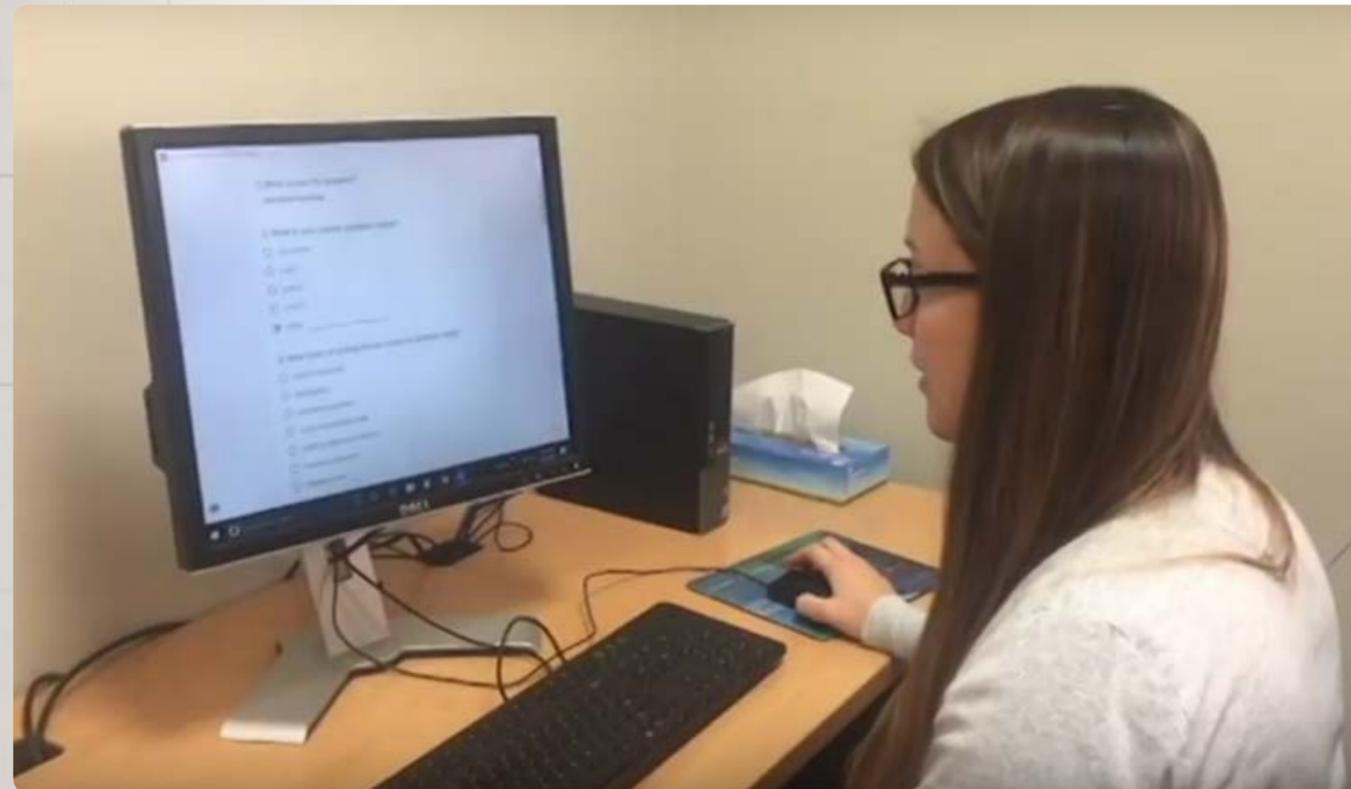
After launching GC Connect, I reached out to five different students across academic departments to help me get to the root of the platform's **usability problems**. These students were people from different cultural backgrounds. They were also at different levels of their respective PhD programs.

I conducted **usability tests, cognitive walkthroughs and first click tests**. These tests measured students' **time-on-task and completion rates** on simple tasks, such as locating the GC Connect landing page, logging on to GC Connect, or creating their password.

Test User:
Test Date:
Evaluator:

Activity	Time	Behaviours	User's Thoughts	Success/Failure	Extent of Success (1 to 5) /Failure (-1 to -5)
Reaching the GC Connect link	8 SEC. (0:08)	KEPT SEARCHING IN TOP MENU BAR.	WAS HARD TO FIND THE RIGHT LINK		
Finding the button to access the portal from splash screen	15 SEC. (0:15)	READ THRU INSTRUCTIONS FIRST. DEBATED WHICH LINK IS RIGHT	LINK COULD BE MORE VISIBLE		
Creating a new password	//	USER INCORRECTLY FOLLOWED INSTRUCTIONS	INSTRUCTIONS ARE CONFUSING		

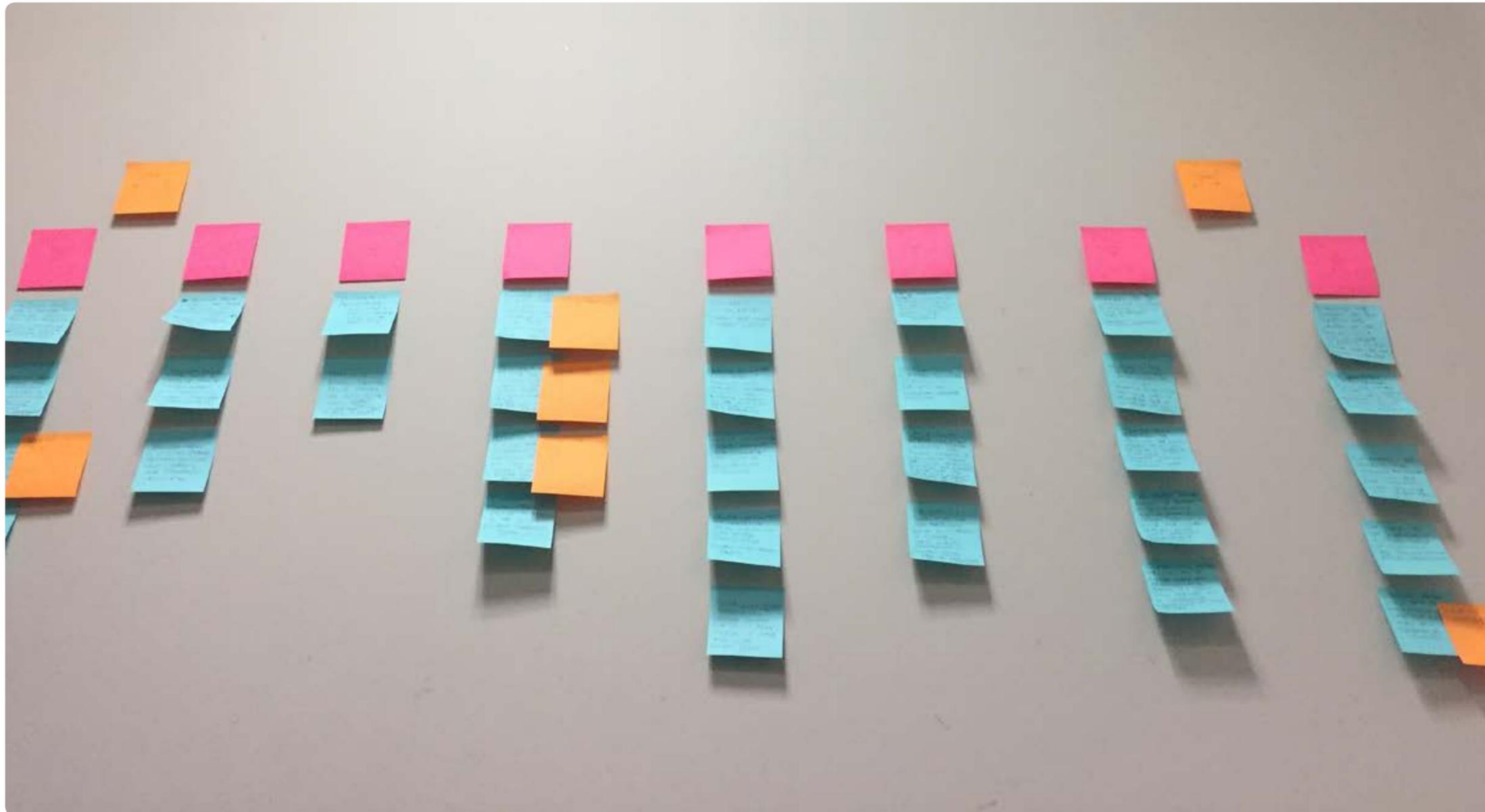
←
MY USABILITY EVALUATION SHEET



↗
ABBIE, A DOCTORAL STUDENT IN CHILDHOOD PSYCHOLOGY

4. Data Analysis

AFFINITY DIAGRAMMING



After the UX testing sessions, I distilled my notes onto **individual problem points** on separate post-it notes.

Next, I used **affinity diagramming** to cluster these problems into topical areas that represent the most **probable use cases**.

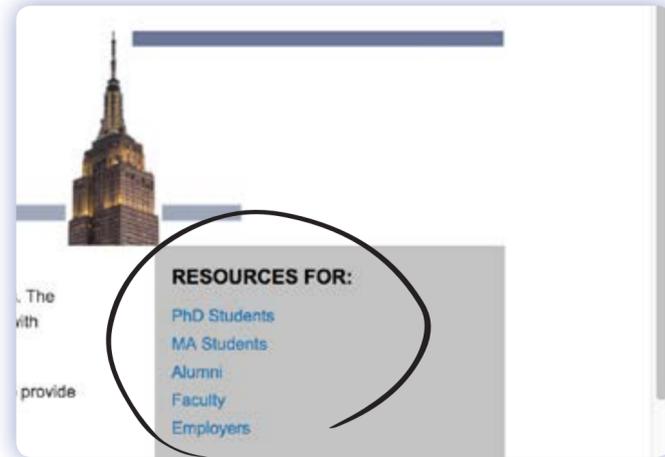
I identified three main areas where the user experience of GC Connect could be improved:

- **Top-level navigation** (improving the findability of the portal link on our homepage)
- **Information architecture** (streamlining our instructions for accessing the portal)
- **Documentation** (clarifying the password create process for users on the login page)

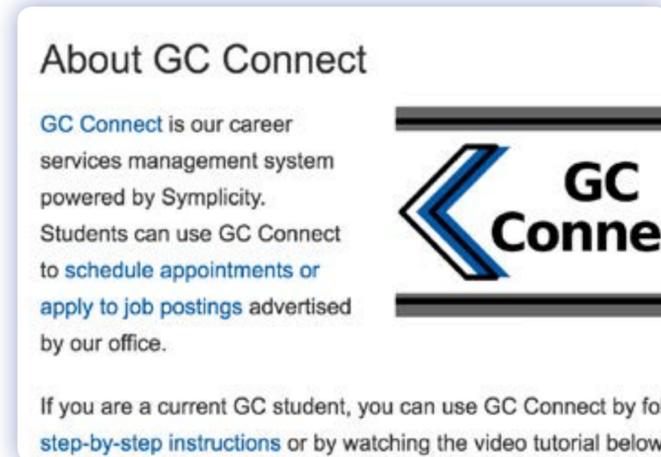
The only challenge left was the GC Connect code base. Because it was built by a third-party SaaS vendor, there was little room for customizing the actual code of the platform.

5. Information Design

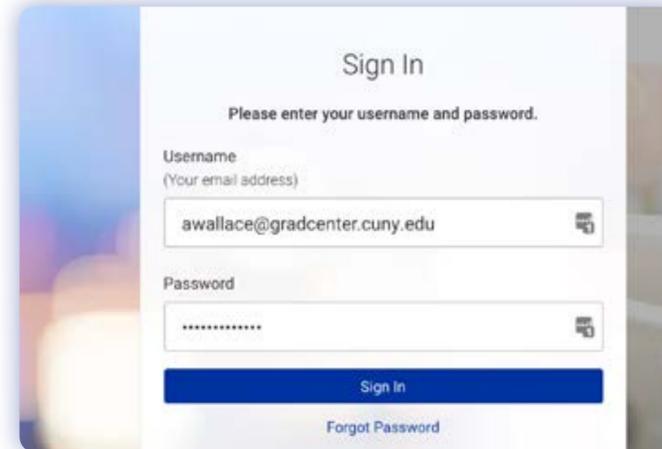
OLD HOMEPAGE - LINK TO GC CONNECT ISN'T OBVIOUS



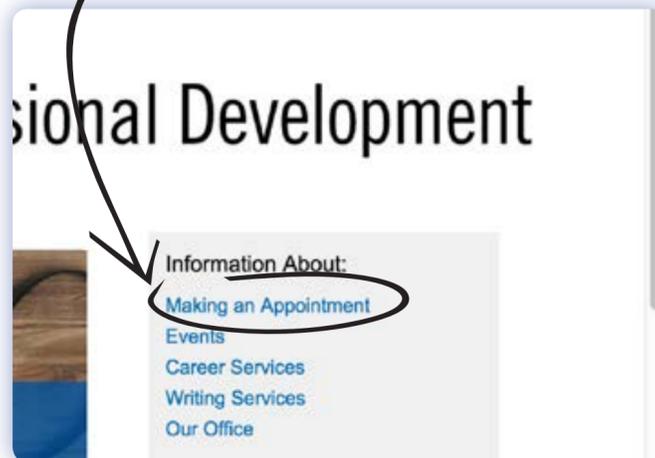
OLD GC CONNECT LANDING PAGE HAD TOO MANY INSTRUCTIONS



OLD SIGN-IN PAGE RELIED ON USERS TO REMEMBER THE RULES



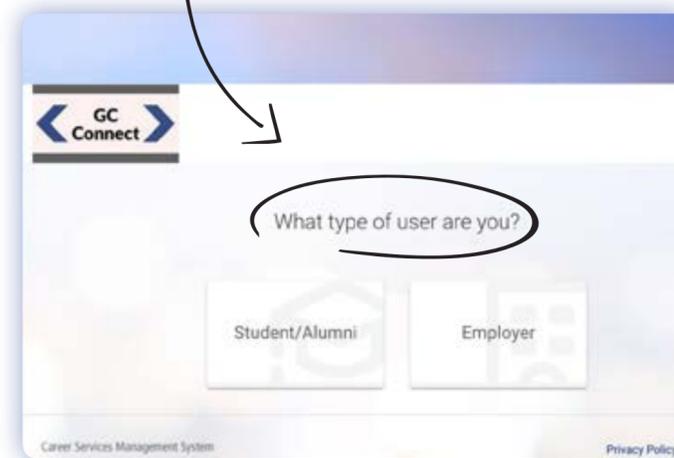
NEW NAVIGATIONAL HIERARCHY PRIORITIZES STUDENT NEEDS



NEW PAGE CHUNKS CONTENT USING ACCORDION MENUS



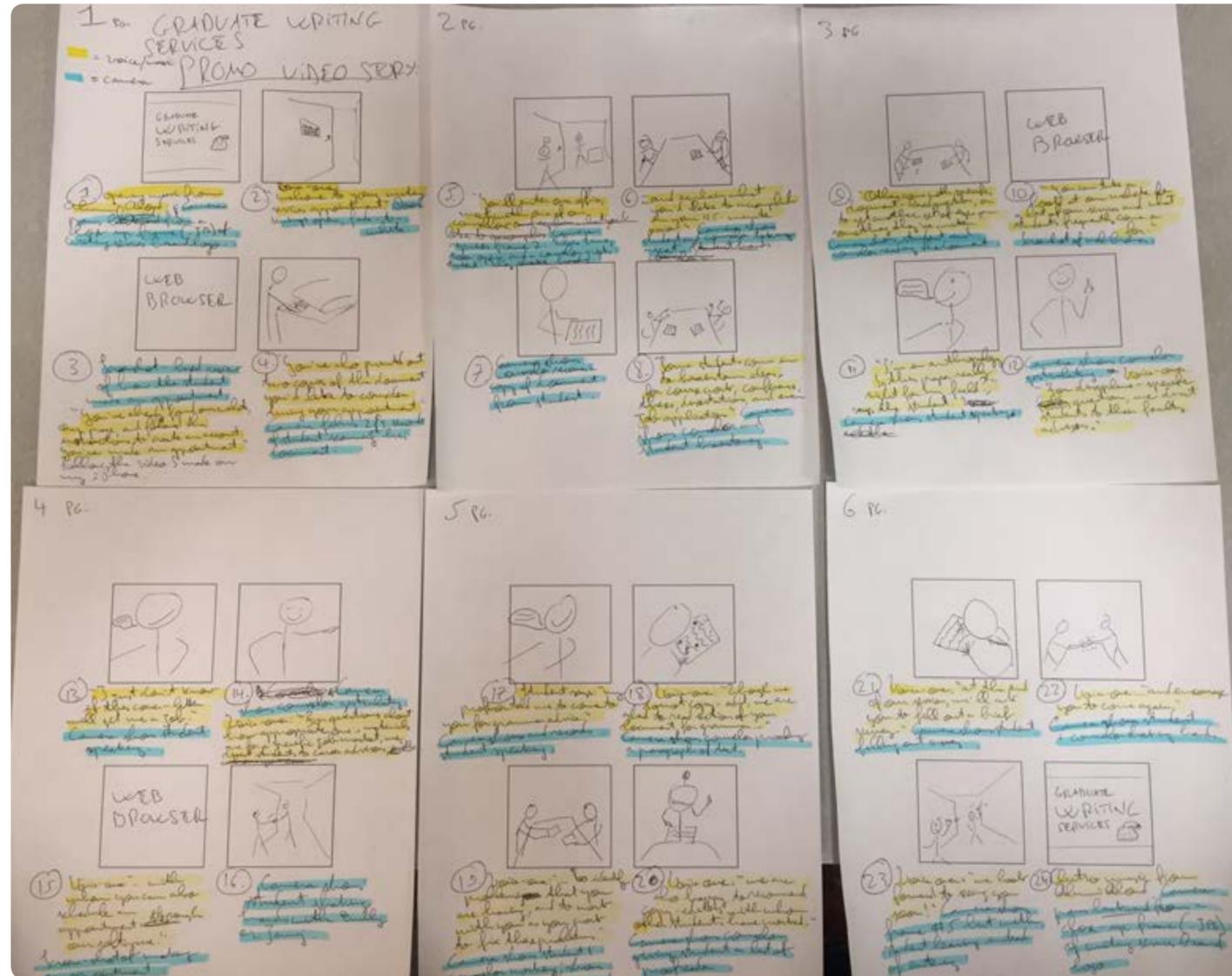
NEW PAGE OFFERS LOW-COGNITIVE LOAD PROMPTS



Collaborating with a web developer in our office, I implemented the following changes that solve the problem areas I targeted:

- I moved the link to access GC Connect above the fold of the browser window on our homepage so students don't have to dig around to find it.
- I streamlined the instructions to use GC Connect by chunking the content. I enhanced readability by creating a drop-down accordion menu using a JQuery plugin, which allows students to selectively drill down to explore information relevant to their needs (this also makes it easier to view on mobile devices).
- I changed the GC Connect link from an "a href" style hypertext link to a large button to improve visibility.
- I clarified the login process for new users on the login page. This drives down the error rate of users by providing clear, accessible instructions.

6. Instructional Deliverables



STORYBOARDING A PROMOTIONAL VIDEO...

...AND VIDEOS HELPING OUR STUDENTS TO MAKE THE MOST OF GC CONNECT



To complement the website redesign, I **created a suite of content** to bridge the gap between student access and successful outcomes with GC Connect.

People learn in different ways. So, I **created a tutorial video** to walk users through the experience of scheduling an appointment in GC Connect.

I also **created three explainer videos** on how to read a job description, how to write a resume, and how to write a cover letter. I **created storyboards, visual artifacts, and scripts** for these videos. I also filmed the videos and provided voice-over narration. By introducing students to our career counselors, these videos help **create trust, credibility, and an emotional bond** with our staff counselors.

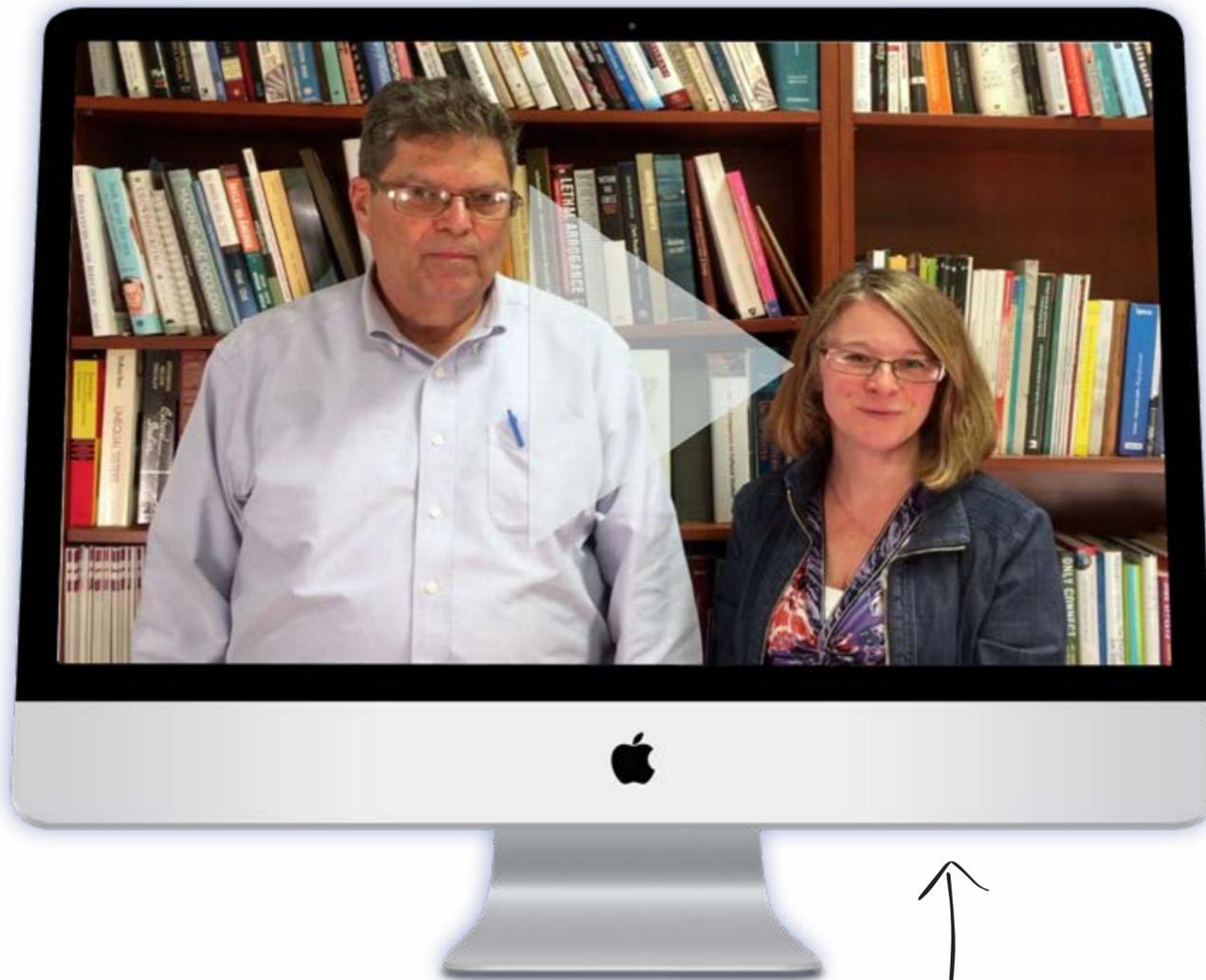
7. Tracking Outcomes

CREATING GRAPHIC DESIGNS

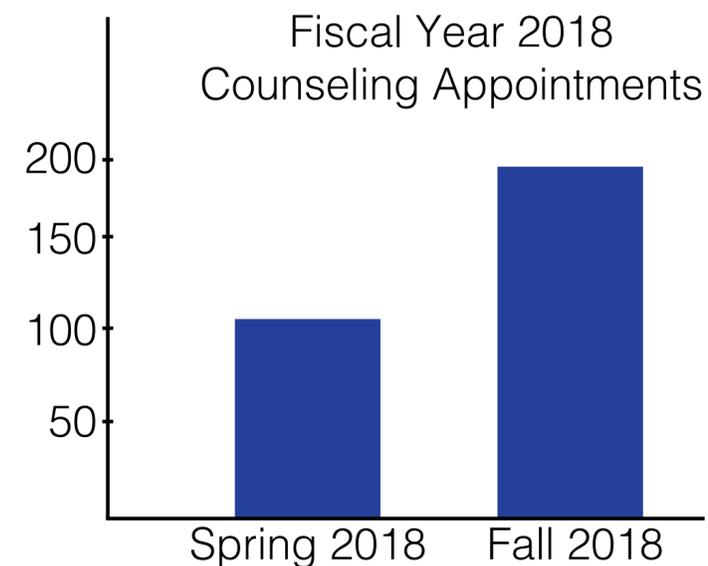


I also created posters and graphic designs for digital display to enhance awareness of GC Connect throughout the GC Community.

Thanks to the redesign of GC Connect, key performance indicators improved across the board, and the rate of appointments scheduled for our counselors went up by seventy-five percent.



AND TRACKING OUR RESULTS



FILMING AND NARRATING THE VIDEOS...



What is Visualizing Venice?

Visualizing Venice is a prototype for an app that documents and visualizes the ancient infrastructure of cisterns that provided fresh water to the citizens of Venice, Italy.

How is it unique?

Visualizing Venice is the first smartphone app that allows users to explore the cistern system of ancient Venice. It geolocates the user's position and visualizes customizable, real-time pathways to interactively navigate the cistern system using augmented reality (AR).

Roles and responsibilities

Interviewing key stakeholders and prospective users; sourcing and coding geographic data; building to-scale digital architectural reproductions; narrating and producing pilot film.

1. Define Problem



SKILLS USED:

- RESEARCH
- MAPPING
- GEO-SPATIAL MODELING
- 3D MODELING
- VIDEO PRODUCTION



KEY STAKEHOLDERS:

- VENETIAN CITIZENS
- TOURISTS
- CITY PLANNERS
- ACADEMIC COMMUNITIES



PROJECT TIMELINE:

- 2 WEEKS

Global warming and erosion threaten the ancient city of Venice. The city is sinking.

To understand how the city can adapt to climate change, an interdisciplinary working group sought to understand how the city and its inhabitants have historically adapted to environmental changes.

How do we narrow the scope of our project to make it feasible?

Collaborating with a working group of art historians and computer scientists at Duke University and IUAV-Venice, our team goal was to map the evolution of Venice's urban infrastructure by visualizing the transformation of the city's system of water cisterns - which historically provided an interface between the city and its watery ecosystem - across time and space.

2. Discover User Needs

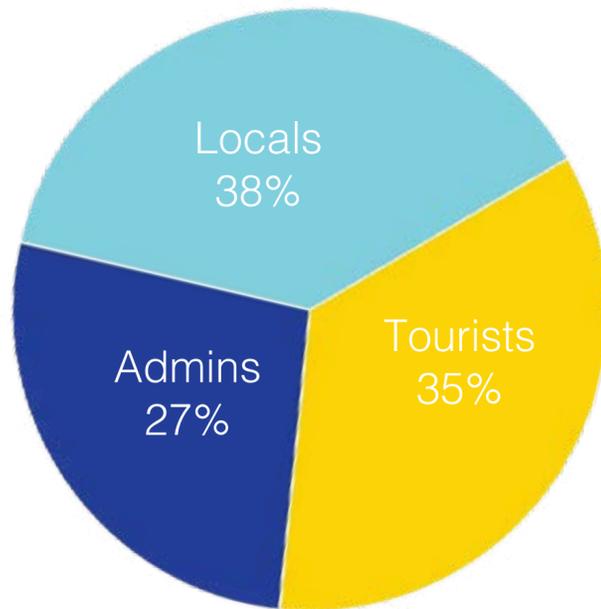
THE CULTURE VULTURE



THE SAVVY TRAVELER



THE GUARDIAN



Marco, 22, is a student. His brother recently moved to Germany. Marco prefers to stay, despite poor employment prospects, because he **loves his city and its history.** “It floods here every year! What will we do when the water gets even higher?”

We need something that will be **accessible and appealing** to members of the public, like Marco, who want to know more about their city’s history.

Elise, 34, is a real estate agent from the U.K. Fearing that it may be gone during her lifetime, Elise wants to **see Venice before it’s too late.** “What did the ancient city look like? And where can we go to find its traces today?”

We need something that will be **accessible** to foreign language speakers who don’t know their way around Venice - but also **educational and fun,** so Elise will want to use it.

Giuseppe, 52, is an urban planner who has been commissioned to draw up plans for the **floodproofing and architectural retro-fitting** of Venice. “How have previous generations solved Venice’s periodic flooding and lack of fresh water reserves?”

We need something that can **provide historical and geographical context** for policy makers, members of municipal and regional government, and NGO staff who are working on this challenge.

3. Research and Mapping

GOING TO THE ARCHIVES



LOADING DATA INTO GOOGLE EARTH



GEOLOCATING CISTERNS!

Using archival records and printed sources - mainly historical surveys and cartographic plans - my interdisciplinary team of architects and art historians **creates a database** of cistern locations.

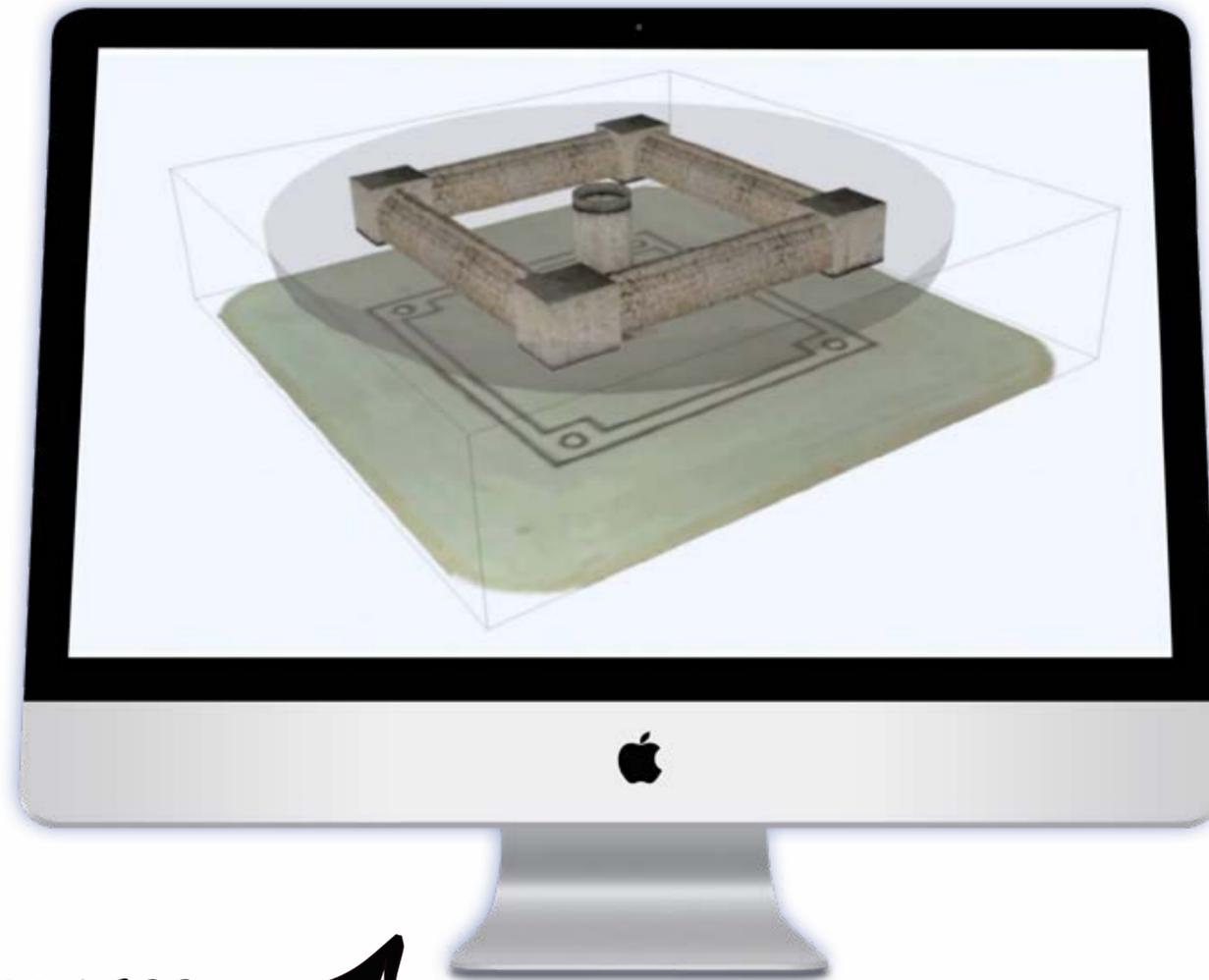
Next, we **geolocate the ancient cisterns of Venice as a network** overlaying the city's topography **using Quantum GIS (QGIS)** software and **Google Earth**.

4. Building Models

DOCUMENTARY
PHOTOS



WHICH WE PROCESS
TO GENERATE 3D
MODELS



Next, using photographs of the urban environment, we **target specific cisterns** in the network that exhibit significant change (such as new or destroyed cisterns).

We use these photographs to **create 3D models** of the original cisterns and their architectural environs using **Trimble SketchUp** and **123D Catch**.

Finally, we **use Layar** to create **augmented reality (AR) time-lapse animations** and overlay these onto the digitized map of Venice to illustrate the **evolution of the cistern system over time**.

5. Present Our Prototype



...AND AUGMENTED REALITY
ANIMATIONS!

**SAVE THE VENICE CISTERNS:
A FRAGILE HERITAGE IN DANGER**

Our final prototype is a richly-annotated **interactive web app** that visualizes the cistern system of Venice.

Bridging the past and the present, it **geolocates the user** inside the ancient architectural spaces of Venice.

By bringing the ancient water infrastructure of Venice to life, Visualizing Venice preserves cultural memory and spreads awareness of environmental sustainability.

In addition to **creating and narrating our launch film**, I **presented our prototype** to an interdisciplinary group of stakeholders - including city planners and municipal officials - to build partnerships and increase financial and logistical support for our app.

THANK YOU

For taking this journey with me.

Anders.a.wallace@gmail.com

[@AndersAWallace](#)