Final Project

David Henslovitz
dhenslovitz3@gatech.edu

1 INTRODUCTION

One of the most stressful activities that we all must engage in at one point or another is job hunting. Nowadays, the stress is compounded by the pandemic and economic depression. As of August 2020, there are around 6.5 million open jobs (Duffin, 2020) and 13.5 million people looking for employment in the US (, 2020) (Duffin, 2020). It is vital that we find a way to get millions of people back to work, and web platforms are in a great position to do just that.

LinkedIn has become the one of the most popular websites for job searching and recruiting, and it's social media features make it stand out from the crowd. Most people realize that having a contact within a company greatly increases the chances of at least getting a first-round interview. A recent study by a talent management agency found that referred candidates or those who were in contact directly with recruiters were about 15x more likely to get hired than those who blindly applied to jobs on job posting websites (Morgan, 2019). Therefore, the degree to which LinkedIn can facilitate these types of encounters and conversations online would likely have a big effect on bridging the employment gap. The availability of reliable information on jobs and companies enables seekers to find the opportunities they are best suited for and most interested in. Properly organized information built efficiently into a platform can save job seekers time, which they might otherwise spend researching individual companies and jobs on other websites such as Glassdoor. My goal with this project is to investigate both how people have found jobs in the past (not necessarily on LinkedIn) and how LinkedIn (and LinkedIn Premium) users have utilized the platform in their job search. My target audience will be individuals looking for jobs (or who have recently looked and found a job), as opposed to recruiters or companies, mainly because this audience is much more available to participate in needfinding and evaluation exercises. Based on the information I obtain regarding the most successful means by which people lands jobs, the most common complaints about the process as well as the particular details of using LinkedIn's job-search capabilities, I can design prototypes for an updated version of the site, focusing on improving and creating new functionality and content relevant to the job search.

2 INITIAL NEEDFINDING

2.1 Needfinding Method 1: Survey

The redesign of LinkedIn's job search interface is primarily targeting those currently looking for a job. Surveying only current job-seekers could limit the amount of data I can gather, so I decided to open the survey up to everyone in class, noting that it is optimal if participants are either current job-seekers or recent seekers who have found a job (within the past year). Both LinkedIn as well as non-LinkedIn users are welcome to take the survey. By including non-current job searchers, recall bias might be an issue, as participants may have trouble recalling the details of their job search. Hindsight and outcome biases could have an effect as well; people may construct a story as to how they landed their job and how obvious their methods were, when in reality things were likely much less clear at the time. Lastly, as LinkedIn is an ever-changing product, the experiences of people at different points in time could differ, which is why it helps if participants have been job searching within the past year.

The tasks of a job searcher might include:

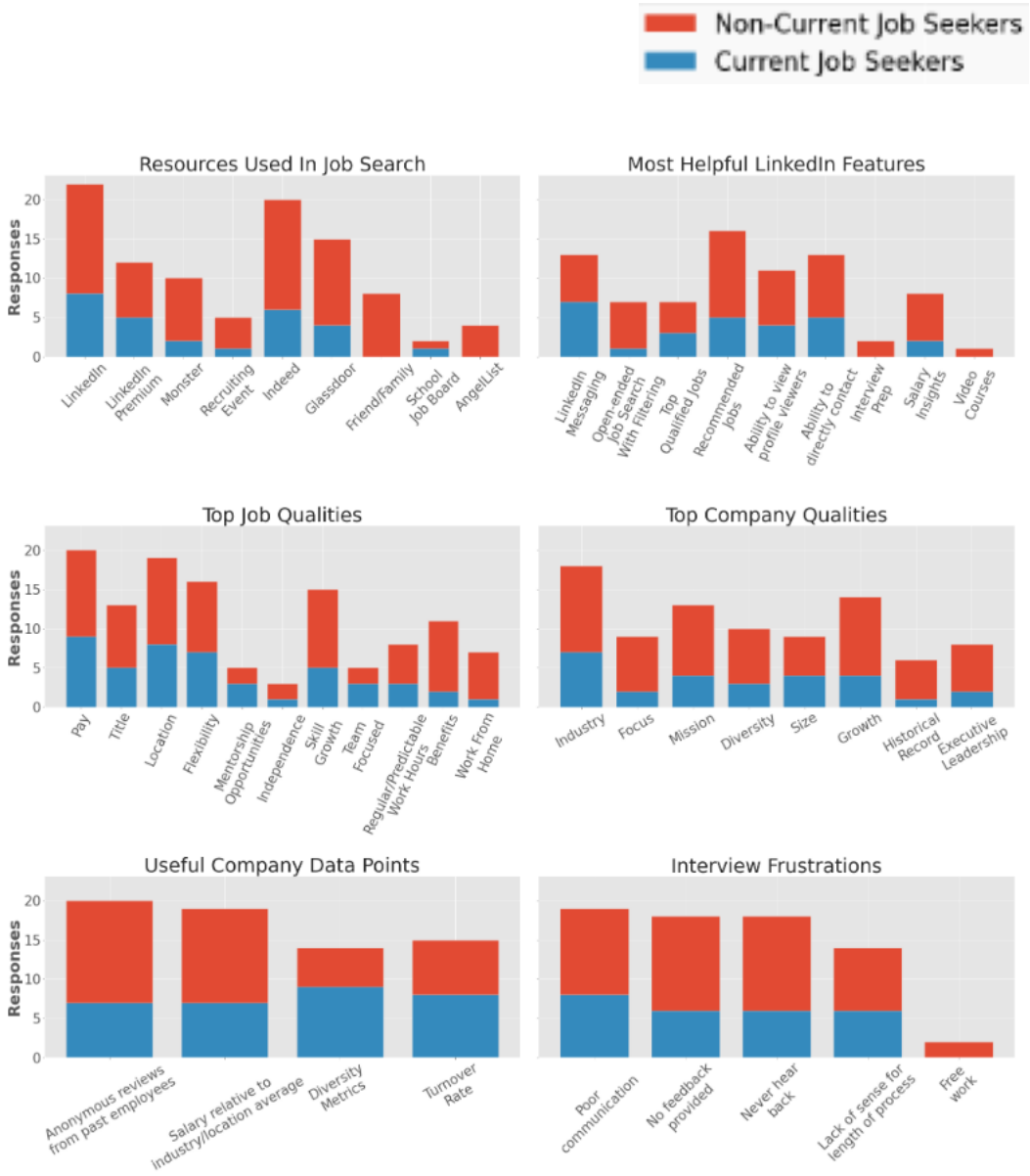
- Update LinkedIn profile, resume and cover letter
- Think about and research companies and/or roles that are of interested
- Find and contact people who may be able to help
- Attend live or virtual recruiting events
- Brush up on skills or learn new skills to increase employability
- Fill out job applications

I compiled a list of survey questions (which can be found in Appendix A) which touch on many of these areas.

2.2 Survey Results - Visualizations

Survey Population	Easy To Find Jobs and Companies On LinkedIn	Instrumental To Connect With People On LinkedIn	Easy To Find Connections Which Help In Search	Able To Determine Whether Or Not Qualified For Roles
Job Seekers	3.90	3.80	3.60	3.60
Non Job Seekers	3.73	3.67	3.13	3.27
All Respondents	3.80	3.72	3.32	3.40

Survey Population	Helpful To Rank Companies On Specific Features	Helpful To See Recommended Courses	Willing To Exchange Data With LinkedIn
Job Seekers	100%	60%	70%
Non Job Seekers	80%	80%	67%
All Respondents	88%	72%	68%



2.3 Survey Results - Discussion

I received 10 responses from current job seekers and 15 who sought work in the past. While I captured many of the responses in the above visualizations, some were not captured. At the end, users were asked to describe how they landed their previous job. 18/25 people provided a relatively clear answer to this question; 6 landed their previous role through a close friend or industry connection, 6 through online job boards and 5 through a professor or school job portal. These answers tell me that prioritizing connections with close friends, family and industry connections such as prior colleagues could streamline users' job search processes and help them focus on the opportunities which offer them the highest probabilities of success.

The first table captures some important user preferences; Generally, users are somewhat pleased with existing job and people search capabilities, but there is certainly room for improvement (low=1 high=5). There exists a gap between users' need for connections with their ability to find meaningful ones (3.72-3.32 = 0.4). Lastly, users feel somewhat confident in their ability to judge their qualifications for roles given the job details provided, however again, there seems to be room for improvement.

The second table shows the percentage of respondents who are interested in new platform features. It also shows the percentage of users willing to provide data to LinkedIn in order to receive useful data from LinkedIn. The majority of users are interested in the proposed features, and are willing to provide LinkedIn with data on previous employment experiences. The other main takeaway from this graph is the discrepancy between job seekers and non-job seekers when it comes to interest in viewing recommended courses. It makes sense that current job seekers would be less able to devote themselves to a course when they are focusing on finding work, whereas those with jobs would be more able to devote time to courses in order to acquire skills that may help them in their current role or in a future job search.

The last visualization is helpful in understanding survey participants' preferences when it comes to platforms, interface features, desired data points as well as their most common frustrations. These preferences, as well as practical feasibility and competitor products will all be considered when I determine what to include in my wireframes.

2.4 Needfinding Method 2: Product Review Analysis

Thankfully LinkedIn is a very popular website, and there are many reviews out there. I found a website which listed 545 reviews specifically about the job searching capabilities of the platform (, 2020). I decided to go through the first 100 reviews, focusing both on common likes and dislikes of various features of the platform. I define common by the specific mention of a feature or design occurring at least 3 times within the chosen sample. It wasn't always easy to tell what a reviewer was describing, especially if it was clear that English was not the main language they used. I did my best to track the occurrence of specific pros and cons attributed to different job searching capabilities. I went through the first 4 pages (25 reviews per page), and reviews were all from 2019 or 2020.

There are a few biases to be wary of here. Confirmation bias and/or the observer-expectancy effect could influence my decisions as to which reviews and specific pros and cons listed I choose to include or exclude from considering. I am likely to more easily spot and correctly interpret review ideas which I had already thought of, and subconsciously gloss over reviews which present different ideas which may cause initial confusion and force me to think more deeply. In order to control for this bias, I made sure to go over the reviews twice and tried my best to focus on the content of all the reviews equally. Another similar bias that could influence my analysis here is the curse of knowledge bias, which entails my inability as a relatively proficient user of the platform to understand the difficulties faced by more novice users. Again, care has to be taken to analyze the reviews thoroughly.

2.4.1 *Common Pros:*

- Easy Apply Functionality
- Connections in general, especially with recruiters and agents
- Job Search Screening tool well designed and easily navigable
- High quality companies, large selection of opportunities, fewer fake companies/jobs than other similar platforms

2.4.2 *Common Cons:*

- Recommended jobs are poor. Should be able to apply filters to them or have them be based on a job search you have done. Lots of noise (jobs in other locations for example)

• Spam messages; improve spam detection
• Fake profiles; improve profile verification processes
• EasyApply should be available to all applications; users should not have to manually fill out the same information over and over when applying to jobs that don't support EasyApply
• Premium is useful but is quite expensive ($30/month), especially for students and unemployed individuals
• Many old opportunities appear in search results; even though there is a filter for this, the default is to include them and many times they are no longer open opportunities
• Security concerns over data privacy given that work experience data is relatively sensitive
• Good for finding full-time work but not as much for contractor/part-time opportunities

3 HEURISTIC EVALUATION

LinkedIn certainly has a lot to offer users, even if they are not Premium members. That is why millions use the service. While it is not exclusively a platform for job seekers, that is certainly one of its main use cases. My favorite part of the platform is the individual profile page. For me, its serves all my needs as a place to effectively manage my 'online resume', with well-organized modules for my work experience, education, skills and interests. I think the design of the page exhibits an optimal balance between professional etiquette and personal creativity. The layout or structure of the page is neat, easy to follow and intuitive. It seems to utilize the similarity principle by presenting information in a modular format common to other websites such as major news outlet sites.

I am also a fan of the messaging webpage on the site. Again, this page exhibits simplicity and ease of use. It is quite similar to other messaging platforms in it's design, such as WhatsApp. When reading and sending messages on LinkedIn Desktop, the interface becomes invisible and all cognitive effort is spent on reading, interpreting, thinking and writing. And if you want to view the profile for someone who messaged you, you can do so quite easily by clicking on their name or profile picture within the message thread. Lastly, for more 'expert' users, one can utilize the simplified messaging bar in the bottom righthand corner of all webpages on LinkedIn. So you could view the full profile page

for someone while also viewing your conversation with them at the same time. LinkedIn does a good job here of creating an interface which is flexible and accommodates a wide range of user abilities and preferences.

My main criticism relates to the job search functionality (under the 'Jobs' tab in the upper banner) on the platform. First are the recommendations. On the Jobs webpage under Recommended For You, it says that recommendations are 'Based on your profile and search history'. How exactly that is accomplished is unknown to the user; however, the user has very little control over this, and must accept the recommendations as they are, hoping that they will improve as time goes on and the system learns their preferences. I have found there to be many jobs in this list which I am not interested in at all, are in locations far from where I am, etc. I personally would prefer the recommendations be based on a single advanced job search, whereby I can spend some time inputting all my desired features and qualities for the jobs and companies I'm interested in. This technique puts the user in charge, instead of relying on the system to produce recommendations however it sees fit.

Another criticism of mine relates to the absence of data and tools which could aid in the benchmarking and comparison of job opportunities. For example, understanding how a jobs' salary stacks up to similar opportunities would be a great indicator to be able to see. Also, certain data points like the turnover at a company or the diversity of their workforce are important qualities not currently displayed on the platform. Lastly, when applying to jobs I always keep an excel spreadsheet containing all the relevant details for all jobs of interest in order to compare them side by side. A simple excel export function could be added to the 'My Jobs' page so that users could properly compare opportunities and view all relevant details on a single screen, heavily reducing cognitive load.

Equity is another concern of mine. I feel that people should be judged on the merits of their character, skills and experience, and not on their gender or the color of their skin. Discrimination is prevalent all around us, and is certainly present in the employment recruiting industry. I feel that LinkedIn could do more to address this. One idea would be to remove all Personally Identifiable Information (PII) from profiles on the recruiters side, so that they can only see the work experience, education, skills and interests of candidates. While this would only change the first initial step in the process, it could enable more equitable access to first round interviews for all job applicants.

It can be difficult to determine qualifications for jobs when oftentimes, postings list enormous numbers of qualifications and years of experience (but will often end up hiring someone without all the credentials listed). This makes it hard for a job hunter to determine whether or not they are qualified for a particular job, as well as which skills they should focus on learning or enhancing.

During the actual interview process, candidates are usually kept completely in the dark. Interviews come and go, weeks go by, and candidates often have no idea where they stand. In the worse case, an applicant spends a tremendous amount of time on a project or assessment and is subsequently never contacted again. And even if companies decide not to move forward with a particular candidate and let them know, they are often very hesitant to offer up a reason why. How can anyone improve without feedback? Finding ways to hold companies accountable for inconsiderate behavior, as well as incentivizing them to provide feedback to candidates are major challenges, but could drastically improve the experience for those looking for work.

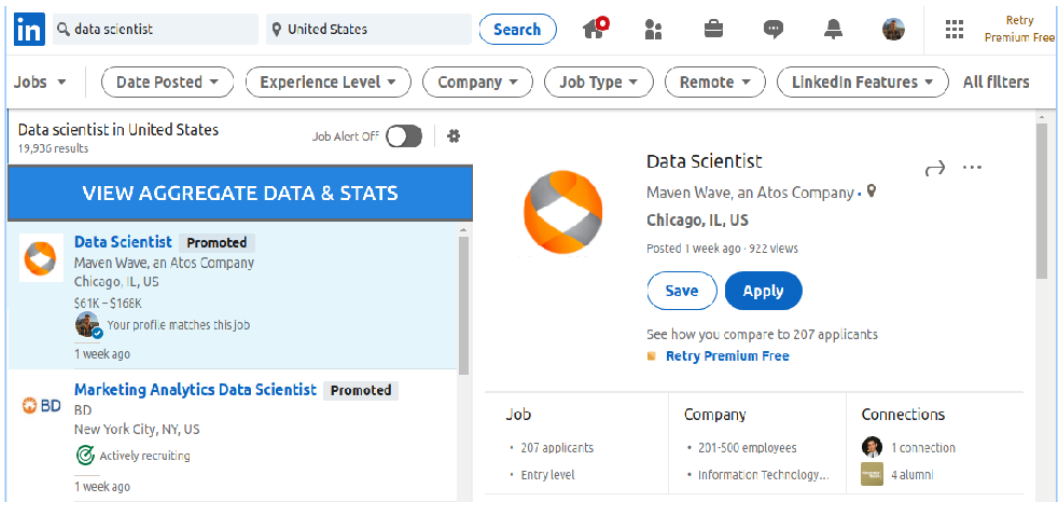
Finally comes business incentives; it is in LinkedIn's interest to create a product which people enjoy using, but which they also feel they need to pay for in order to fully reap the benefits when it comes to the job hunt. In addition, LinkedIn makes its money when users are subscribed to the Premium membership, which they are unlikely to do if they are happily employed (at least the Career package meant for job searchers), so it is also in LinkedIn's interest to make sure that users don't find a job right away and spend some time on the platform paying their membership dues. But not too long, or they might abandon LinkedIn completely. Another concern is the cost - $30 per month can be substantial for many who are unemployed. Lastly, the membership includes a bundle of features, many of which LinkedIn members might not end up using but will have to pay for. Clearly, there is a misalignment of incentives between the platform users and the company. In my mind, the key to solving this problem is to provide users with flexibility when it comes to payment options. Maybe users could be charged per-Premium feature, instead of bundling them all. Allowing users to pay only once they have found a job (and subsequently quit Premium membership) would ensure that they are only paying when they have the income to afford it. If properly implemented, I could see these two features having a major impact on the number of Premium subscribers and the length of time they remain paying customers, as well as better serving users' needs.

4 INTERFACE REDESIGN

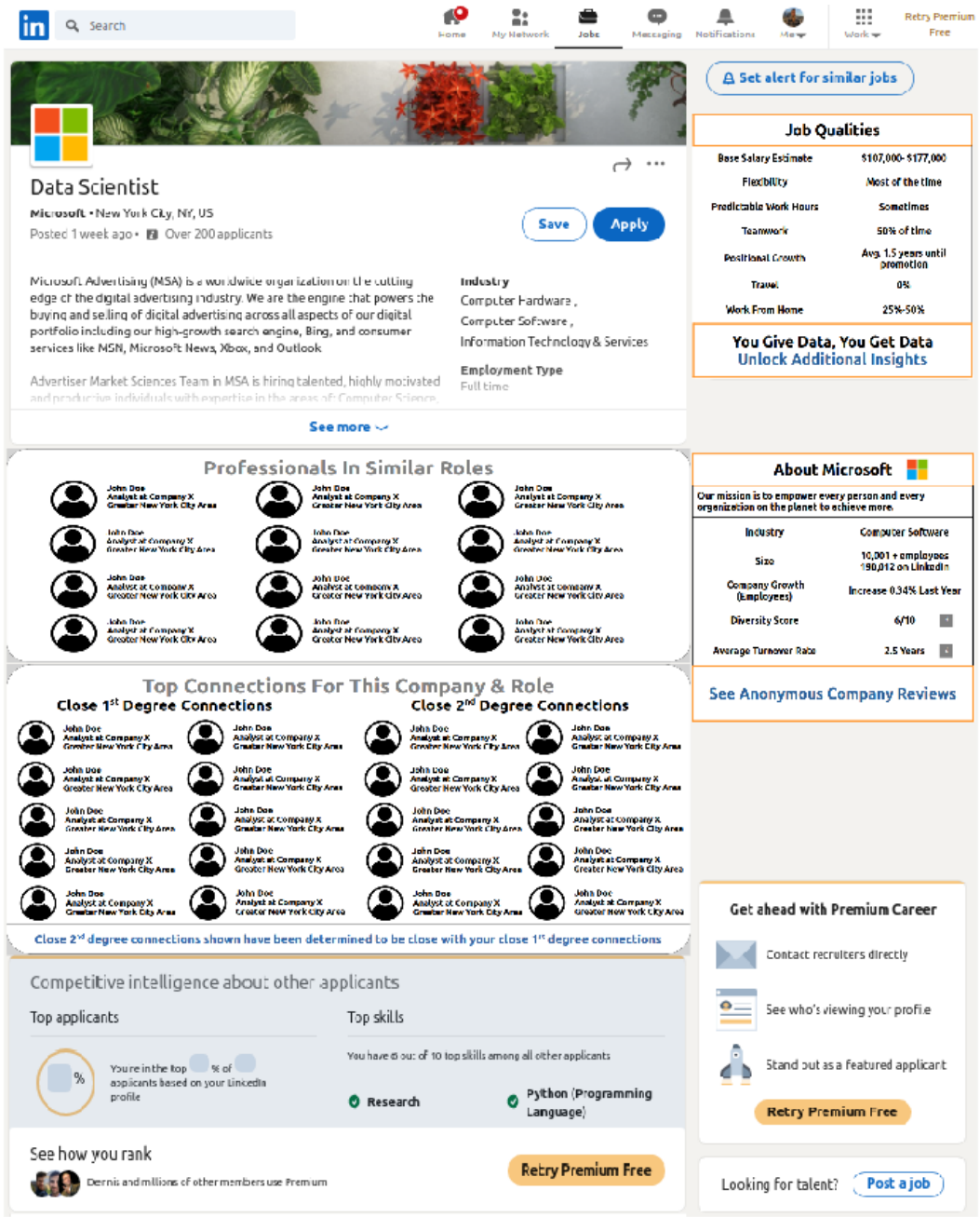
Many of the proposed changes to certain webpages on LinkedIn deal with adding functionality and data in order to provide users with new information to aid in their job search. Some of the information is entirely new, like the diversity score and turnover rate, while others, like top connections, are merely existing user connections mapped to specific jobs. The latter is an example of functionality added to reduce the cognitive load of the user, who would otherwise need to do a lot of digging in order to find such connections. Lastly, certain information is merely moved from one location on the webpage to another in order to make it easier for users to navigate the page. These enhancements improve the discoverability and structure of content on LinkedIn's webpages.

I have created four wireframes each of which either redesigns an existing webpage/feature on LinkedIn or offers a vision of a new webpage/feature. Two of the four depict significant changes to existing webpages, one slightly alters a webpage and the last is a whole new webpage that does not currently exist on LinkedIn.

4.1 Job Search Results - View Aggregate Data & Stats

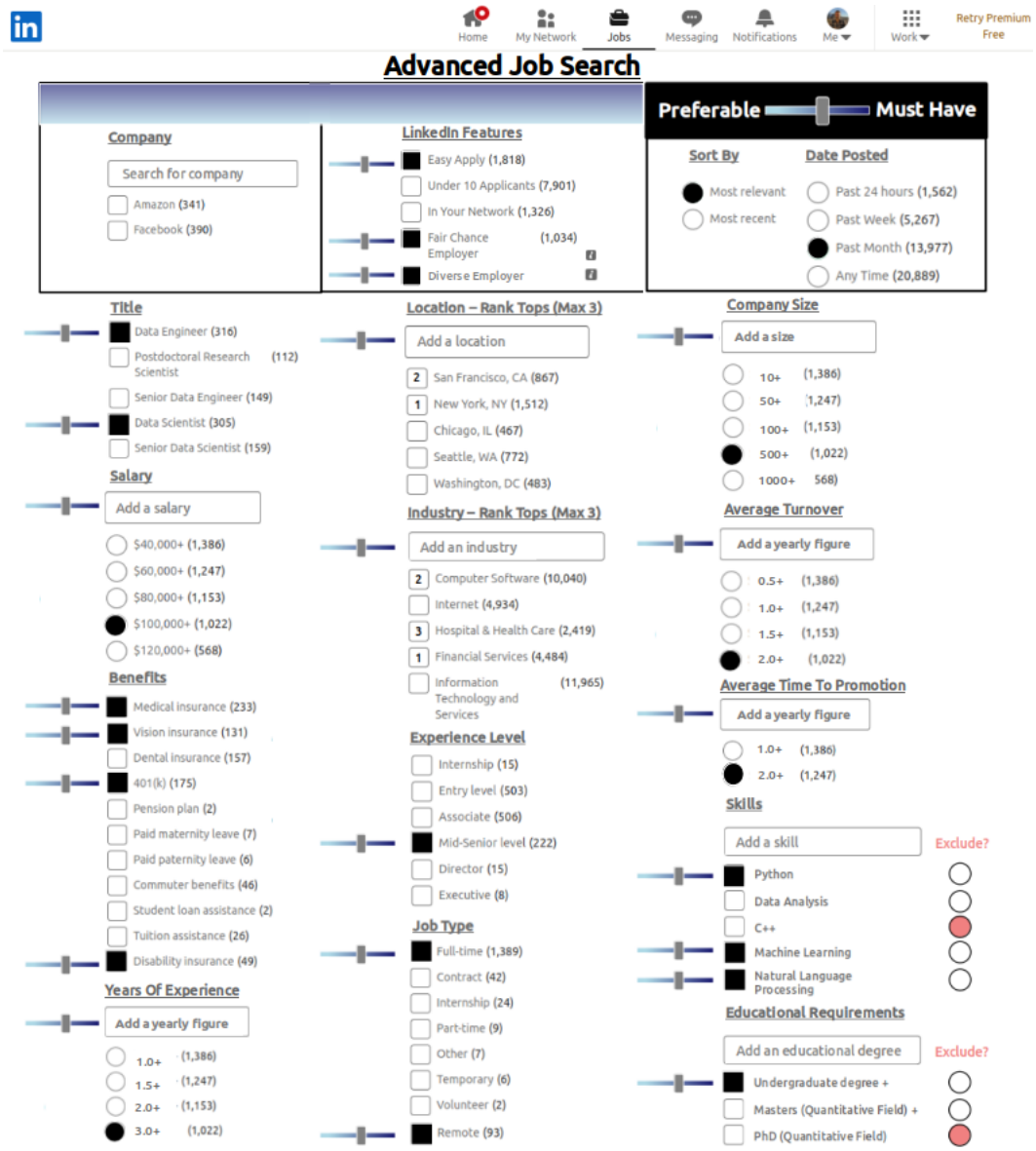


4.2 Job Details Page



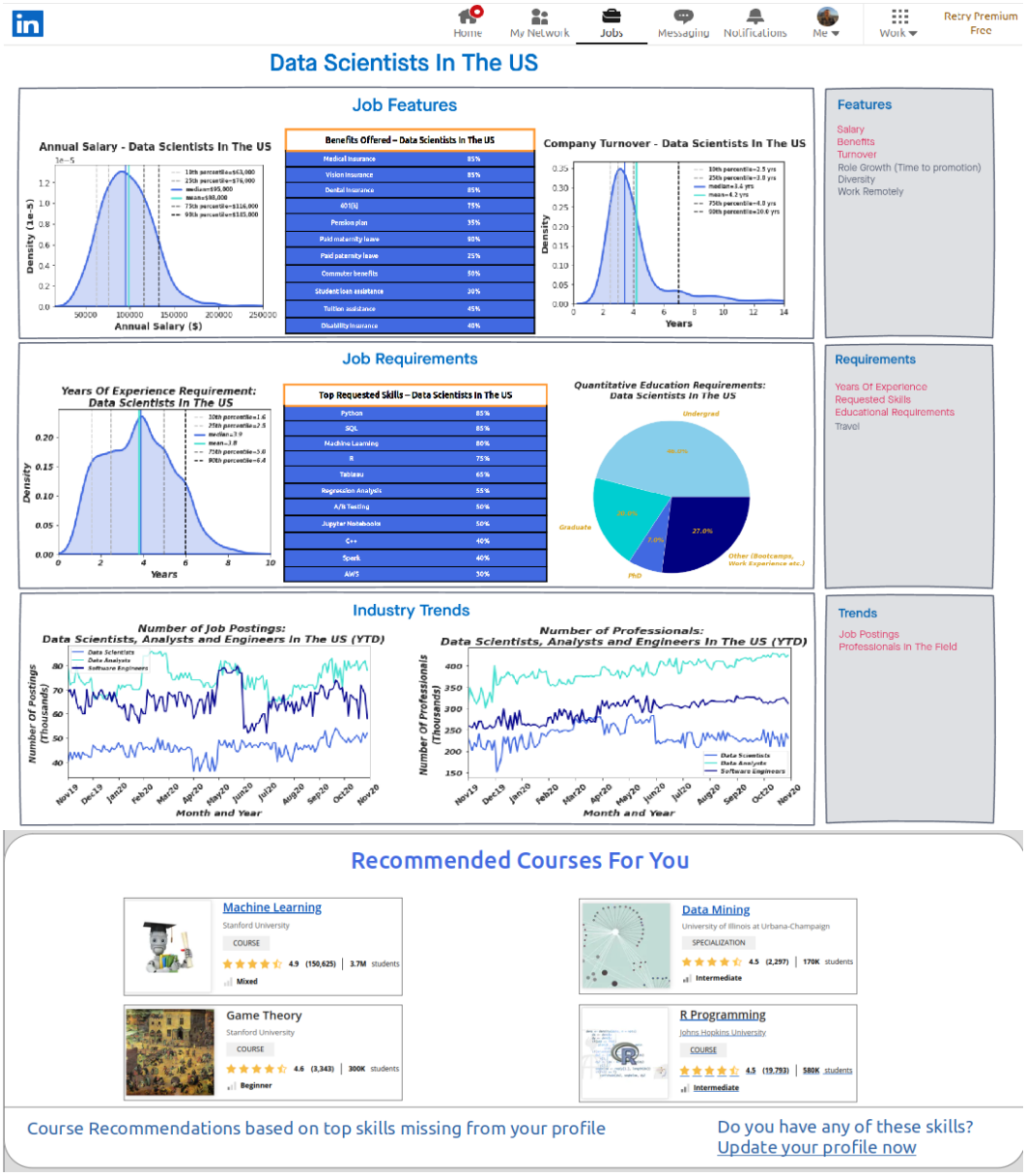
The original version of this webpage, as well as the individual modules added can be found in Appendices B-F.

4.3 Advanced Job Search Page



The original 'All filters' window can be found in Appendix G

4.4 Aggregate Data & Stats Page



Four of the individual visualizations can be seen in detail in Appendices H-J.

5 INTERFACE JUSTIFICATION

5.1 Job Details Page

The Job Details Page wireframe (section 4.2) contains significant changes to the existing design of the page. It contains five changes to the existing webpage; these are the Job Qualities module, About Company module, Top Connections module and Professionals In Similar Roles module.

The Job Qualities module contains pertinent job qualities that are of interest to job seekers, as per survey results. Some of the data may exist in the free-form job description, some exists in isolated modules (e.g. Salary Estimate) and others are not present on the webpage as it currently exists. I am assuming that LinkedIn begins offering data like this in return for user-provided data (I have named the initiative 'You Give Data, You Get Data').

The About Company module contains data that can be found on the company-specific webpage; this module therefore improves the discoverability of this information as well as ease and comfort for the user, as they can evaluate an opportunity with both job-related and company-related features in mind without needing to switch webpages. A few additional data points (company growth, diversity score and average turnover rate) are added to this module since they were requested data points from the survey I conducted in needfinding. Both the About Company and Job Quality Modules are designed to be consistent with the design of other modules on the page and with LinkedIn in general.

The Top Connections module addresses a significant need identified in the survey results. Most respondents said they thought connecting with people via LinkedIn messaging was fairly important in their job search; however they rated their ability to contact the right people at about average. More importantly, when asked at the end of the survey how respondents found their previous jobs, about a third of them said it was through a close friend, family or industry connection. Therefore, I decided to design this connections module by prioritizing 'close' connections. The determination of who is or isn't close is important but will not be discussed here and is assumed to be robust. Both close 1st degree and 2nd degree connections are shown; close 2nd degree connection reflect individuals who are close to a users' close 1st degree connections, and who are relevant when it comes to a particular role or company. This could be someone who

works at or worked at a particular company, or one who works in a very similar role at a similar company. In a nutshell, the data seems to suggest that not all connections are equal, and close friends or colleagues are much more likely to be effective when it comes to being introduced to a role and getting your foot in the door.

The Professionals In Similar Roles module is quite similar; however, the goal is to allow users to view the skills held by people currently or previously in a related role so that they have a better idea of the actual skills necessary to perform the job function, as opposed to the ones listed in the job description. Since the skills listed by recruiters are often exaggerated, it could help to see what skills actual employees have in certain roles as a more realistic measure of job qualifications and expectations. Survey results verified that users are not completely satisfied with their ability to determine qualifications based on the job description alone.

5.2 Advanced Job Search Page

The Advanced Job Search Page wireframe (section 4.3) is built off the All Job Filters window which can be viewed after inputting a basic job search under the 'Jobs' tab of the top banner on the website. You can view this pop-up window in Appendix G. The impetus for a redesign of this functionality stems from several reviews I read during my needfinding exercise. Users generally enjoyed receiving recommended jobs, however many of the jobs were not relevant to them. On LinkedIn, recommendations are generated 'Based on your profile and search history'. This doesn't really give users much control over the recommended content, apart from being able to alter their profile and searches going forward until appropriate recommendations are generated. The goal here is to give the user more control over the content being recommended so they can spend less time filtering through a long list of recommended content and more time apply to roles they are actually interested in. Some users might be fine with the recommended content they receive and will not want to spend the time to fill out this advanced search page - and that is fine. This illustrates the principle of flexibility - the design should accommodate a wide range or individual preferences and abilities.

Most of the fields on the wireframed webpage come directly from the 'All job filters' window; additional fields were added based on the most desired company

and job data requested by survey participants. The horizontal scroll bar indicates the extent to which a user cares about a particular field, and for certain fields a user can exclude certain options entirely from their search (i.e. a user who does not want to see jobs that require C++ programming skills). These precise control mechanisms help facilitate better recommended content. However, the increased amount of functionality does come at the cost of simplicity. It will be important to see how intuitive the design of this page is during needfinding and then make plans to adjust it accordingly.

5.3 Job Search Results - View Aggregate Data & Stats

The Basic Job Search Results wireframe (section 4.1) contains a slight modification to the existing webpage; namely the inclusion of the blue 'VIEW AGGREGATE DATA & STATS' button. The Aggregate Data & Stats page (which I created from scratch and will discuss in the next section) provides the user with aggregate role and location-specific data on salaries, benefits offered and skills required, among others.

5.4 Aggregate Data & Stats Webpage

The Aggregate Data & Stats Webpage wireframe (section 4.4) consists of several types of data visualizations meant to provide an overview of certain job and company features for specified job titles (i.e. Data Scientists) within a specified location (i.e. United States). The visualizations include graphs, tables and charts which depict features such as Annual Salary, Requested Skills and Company Turnover. Industry trends depict the number job vacancies as well as filled roles for Data Scientists relative to similar positions (i.e. Data Analysts and Software Engineers) over the last 12 months. The right-hand panes allow users to select among the various options of features to depict, allowing for more to be added without the need to redesign the page in any way.

The inclusion of this webpage is meant to address a largely unmet need to provide relative benchmarks and overviews to job seekers looking to evaluate and compare job opportunities. It will be important to determine if these visualizations are easily understood by a wide range of potential users, and which ones are more/less intuitive. While the full distributions for salary and company turnover data may provide more information to users, if they are confused by the graphs then they will likely not gain any benefit from the data. It may be the case that a simple table showing the mean, median and a few percentiles

would suffice; these are questions I intend to investigate during evaluation.

Lastly, recommended courses are shown to users based on both the most sought skills for a particular role as well as the users' skill deficiencies. Most survey respondents said they would be interested in such a feature - however, non-current seekers expressed much more interest (80% vs 60%). Since non-current job seekers are more likely to visit this Aggregated Stats page as opposed to an individual job page, I decided to included this module here.

6 EVALUATION PLAN - INTERVIEW

6.1 Interview Description

In order to evaluate my redesigned and newly created webpage wireframes, I plan to conduct interviews by which I can get a sense for the usefulness of the added functionality as well as the intuitiveness of the designs. I will try to conduct at least 5 interviews, including both current and non-current job seekers. Given that others in class will likely be working intently on their own projects and it is the week of Thanksgiving, I intend to recruit mostly friends and family. I will try to ask a diverse group of these folks (from a skills background and personality type perspective) in order to represent as wide a range of potential users as possible. One benefit of interviewing people I know well is that they will be more likely to provide me with honest feedback (especially if I ask them to criticise my work) as opposed to interviewing strangers, in which case the social desirability bias could become a problem. And to avoid an observer bias from taking hold during interviews, I plan on saying as little as possible and providing direction only when necessary. Instead, I hope to present them with my work and have the explore and comment on it without interference. The questions I've prepared below will serve as a useful tool in guiding the discussion forward when participants get stuck and do not have any comments, criticisms or ideas that come to mind initially.

Through a video-conferencing tool, I can share my LinkedIn page with participants, mimic a job search and switch over to my wireframes along the way to show the proposed changes and additions. I aim to provide only enough background information as is needed in order to help participants make sense of newly created functionality, and make note when participants have a difficult time understanding the purpose behind or usage of certain functionality.

6.2 Interview Questions & General Structure

While I hope to conduct the interview in a fairly unstructured manner, I have prepared a list of questions to guide me:

6.2.1 *Starting on LinkedIn Home page:*

• How would you start your job search on the LinkedIn platform?
• On the Job Search page (web page corresponding to 'Jobs' button in top banner of website) what is displayed in the bottom section?
• Do you believe that the Recommended Jobs list is accurate and mostly contains jobs you would be interested in applying to?
• Do you wish you could have more control over the jobs which appeared under the Recommended Jobs section?

6.2.2 *Looking at wireframe of Advanced Job Search web page*

• Can you determine the purpose/functionality behind the horizontal blue bar with the slider in the middle?
• What is the purpose behind the Exclude fields?
• What are your thoughts about this page? Do you understand the purpose? Is it too 'busy'? What would you change?

6.2.3 *After navigating back to Job Search page and input search for a job title and location in the 'Search for your next job' section (e.g. Data Scientist, United States):*

• Show participant a wireframe of this page which includes 'VIEW AGGREGATE DATA & STATS' button. Can you determine what is different about this wireframed page relative to the actual LinkedIn platform?
• What do you think this button leads you to?
• After describing the Aggregate Data page briefly - Do you think the button properly describes the functionality I have described to you? Would you name this button differently? Would you put it elsewhere on the webpage?

6.2.4 *Looking at the newly created 'Aggregate Data & Stats' page:*

• What do you think the purpose of this page is?
• Can you explain to me what a few of these charts and graphs are describing?
• What are the righthand modules there for (Features, Requirements, Trends)?

Is there a better way to integrate such functionality onto the page?
• What is the purpose of the Recommended Courses module?
• Do you think this webpage is useful for users of the platform? Which type of users? Is it too cluttered or is the right amount of information displayed?

6.2.5 *Back to the Job Search Results page, select a particular job bringing user to the Job Details page and showing participant both the page on LinkedIn as it is as well as the new version I created:*

• What do you notice that is different about the wireframe vs. the webpage?
• Do you find the Job Qualities and About Companies modules useful? What would you change?
• What is the purpose/meaning behind the Professionals In Similar Roles and Top Connections modules?
• What does it mean for a connection to be 'close'? Do you think emphasizing close connections would be useful in your job search?
• What would you change about the functionality or layout on this page? Is there other information or tools you would add on to this page?

6.2.6 *End the interview with a general brainstorming session*

7 EVALUATION EXECUTION

7.1 Description Of Raw Results

Much of the information I obtained from interview participants was targeted at the same group of enhancements or changes I made. Some of the feedback from individual participants was unique, though, and was not widely recognized or reported. I will first describe the most common confusions, questions, ideas and feedback provided by participants and then list the more unique ones.

7.1.1 *Common Responses*

• 'View Aggregate Data & Stats' is not the best term to describe the webpage I created, which shows aggregated industry and location data for particular job titles. It is too technical and will likely confuse many users.
• On the Advanced Job Search page, it was difficult to understand/interpret the horizontal blue line with the grey slider that appears next to many of the fields. Some participants had an easier time once they saw the description of this feature in the top right-hand corner of the webpage.

• On the Aggregate Industry Data & Stats page participants had a difficult time understanding the purpose of the right-hand modules labelled 'Features', 'Requirements' and 'Trends'. The highlighted red text was not enough of a cue to participants that these fields were selected
• On Job Details page, most participants thought that the Top Connections Module was more important and therefore should be placed above the Professionals In Similar Roles module.
• Too many profiles listed in these two modules. They each provides different methods for how they would change this.
• Useful to compare aggregate industry stats/trends with specific job listings.
• Useful to pull information out of the job description portion of the page like required skills for easier readability.
• Helpful to show Job Qualities and Company Information on Job Details page.

7.1.2 *Unique Insights Mentioned*

• Would be nice to see Glassdoor Reviews or other reviews of a company broken out by different categories (employee happiness, productivity etc..)
• On the Advanced Job Search filtering page, in addition to filtering by salary you could also filter by equity compensation
• The Advanced Job Search page is a bit overwhelming as there are so many fields to choose from - would be more aesthetically pleasing if fields were grayed out or minimized if not chosen to reduce clutter.
• On the job details page, allow user to hover over a profile under the Professionals in Similar Roles module and see a brief listing of their skills and qualifications for their current role.
• Titles are misleading - for example, the title Data Scientist could encompass a wide variety of skill sets depending on the company or industry. A Data Scientist in one company could be a Data Analyst in another. Would be interesting to try to quantitatively determine what a role should be called based on the required skills.
• Create functionality that allows users of the platform to explore various career alternatives if they are looking for a switch and not sure of the extent to which their skills are transferable to various domains.
• Unlikely to find many shared close connections between user and a particular company. Better to combine Top Connections and Pros in Similar Roles modules as they are quite similar.

7.2 Proposed Changes

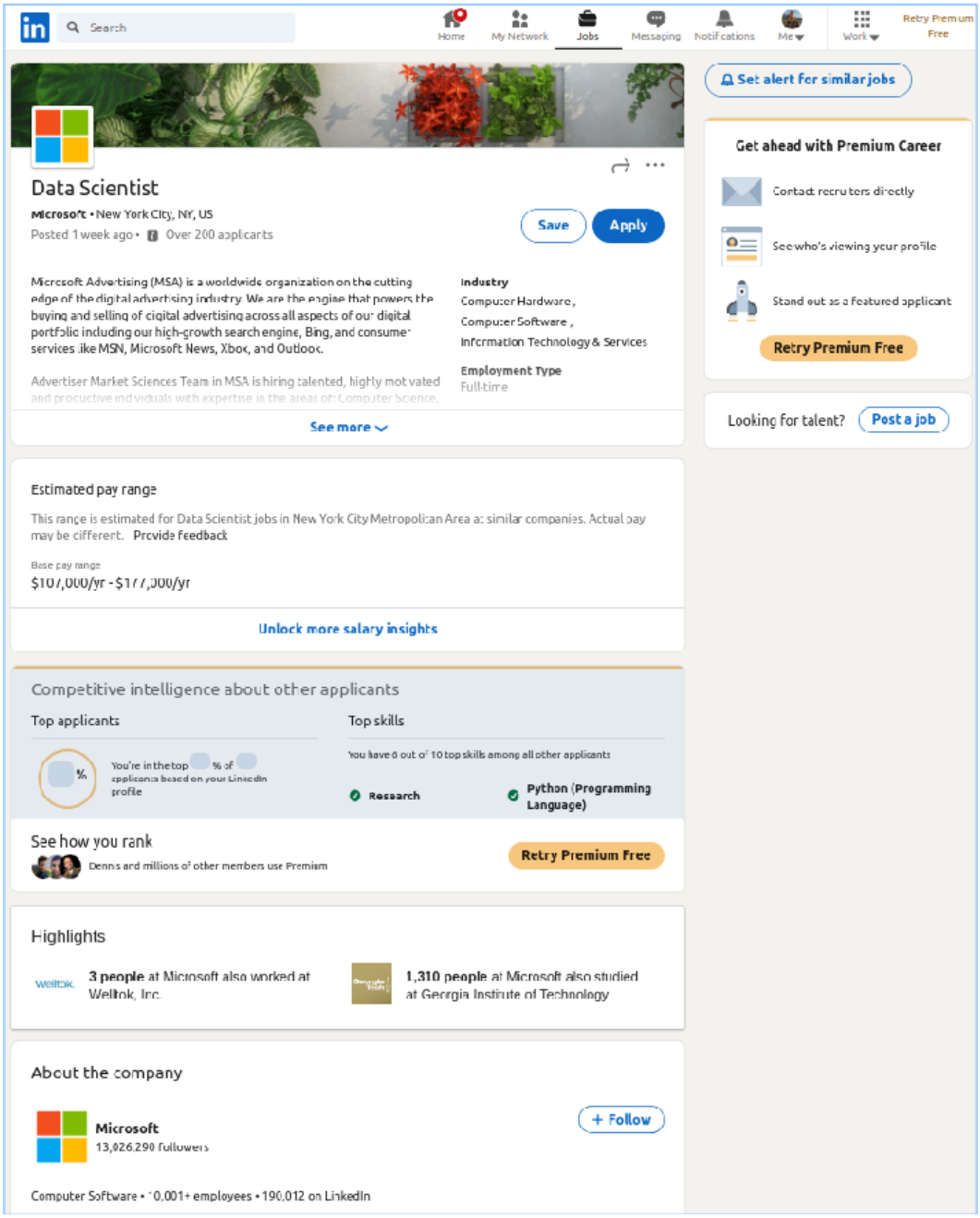
Given that the majority of interview participants struggled with the same sets of features, I would prioritize these for changes and enhancements. I also think some of the one-off insights are important to consider. Below I list out changes, additions and removals of functionality based on data gathered from my interviews:

• Change the name of the 'View Aggregate Data & Stats' button to something more easily understood by a wider audience, such as 'Key Industry Figures' or 'See Job Search Insights'.
• The slider functionality does not intuitively capture the relative preferences of users for particular features. When shown the description in the top right-hand corner of the Advanced Job Search page ('Nice to have','Must have'), participants had an easier time figuring out what it's purpose was, but some still struggled. Finding the right balance between powerful functionality and ease of user on this page is critical, and so further research should be done in order to determine whether a better explanation of the slider functionality would suffice, whether to redesign it from scratch and measure relative preference through a different tool or whether to scrap it completely from the web page.
• On the Aggregate Industry Data & Stats page, add boxes next to the specific items in the right-hand modules ('Features','Requirements','Trends') which allow users to check off the items which they would like to view.
• Instead of switching the ordering of the Top Connections and Pros in Similar Roles modules on the Job Details page, turn them into a single module. Denote professionals in similar roles, 1st and 2nd degree connections next to user profile pictures. Also, add scrolling functionality so that fewer profiles can be shown within the module at a given time, creating a less cluttered look.
• Add skill and education requirements as a module on the Job Details page (as well as potentially other information hidden in the job description text)
• Pull data into the Job Details page from the Aggregate Industry Data & Stats page so users can view job-specific details in relation to industry-wide/location-specific stats and trends.
• Generally, I would include many more information boxes (small grey boxes with an italic i to denote more information, as is currently present on LinkedIn) in order to provide a sufficient explanation for new features in case the functionality and text on the webpage does not speak for itself.

8 APPENDIX A: NEEDFINDING SURVEY

What is your age?	>20,20-29,30-39,40-49,50-59,60+
What is your gender	Male, Female, Prefer not to say
Are you currently looking for a job?	Yes/No
Which of the following websites or other methods are you now or have you recently used in a job search?	Linkedin, Linkedin Premium, Glassdoor, Indeed, AngelList, Monster, School Job Board, Recruiting Event (Live/Virtual), Other
Please rank the following Linkedin features (some Premium) which you have used by their helpfulness in your job search	Linkedin Messaging, Recommended Jobs, Open Job Search With Filtering, Top Qualified Jobs, Ability to view who has looked at your profile, Ability to directly contact recruiters, Interview prep (New), Salary Insights, Video Courses (New), Other
How easy is it for you to find opportunities you are interested in on Linkedin?	1: Very Easy 2: Somewhat Easy 3: Neutral 4: Difficult 5: Very Difficult
Please select the most important qualities you look for in a job	Pay, Title, Location, Flexibility, Mentorship, Independence, Skill Growth, Team Focused, Regular/Predictable Work Hours, Benefits, Work From Home, Other
Please select the most important qualities you look for in a company	Industry, Mission, Diversity, Size, Growth, Historical Record, Other
Which of the following data points about companies would you find useful when determining whether or not you are interested in working for a particular company?	Diversity Metrics, Turnover Rate, Anonymous reviews from past employees, Pay relative to industry/location average
Would it be helpful to you if companies and positions were ranked according to these various qualities?	Yes/No
How helpful is it for you to be able to connect with 1st, 2nd or 3rd degree connections via Linkedin who can aid you in the job search process?	1: Extremely helpful 2: Helpful 3: Neutral 4: Not very helpful 5: Not helpful at all
If so, in what ways do you hope they will be able to help you?	1: They work at a company I'm interested in and can provide guidance and maybe help get me an interview 2: They know someone at a company who I'd like to contact in order to get more detailed information and try to increase my chances of getting an interview 3: They work in a related role and can advise me on how to go about applying and interviewing for such a position 4: Other
How easy is it to find such individuals on Linkedin?	1: Very Easy 2: Somewhat Easy 3: Neutral 4: Difficult 5: Very Difficult
On average, how confident are you in your qualifications for any particular role based on the information provided in the job description?	1: Very confident 2: Somewhat confident 3: Neutral 4: Not confident 5:Totally unsure
(If you have Premium) To what degree do the Applicant ranking features help in determining your standing and qualifications for a particular role relative to your peers (Have you noticed getting more interviews from jobs where you are told you are highly qualified?)	1: Greatly 2: Somewhat 3:Neutral 4: Not really 5: Not at all
Which of the following features do you think would help you determine your qualifications for particular roles?	Job qualifications which are less exaggerated so they are more aligned with actual job duties Stats about most sought skills for a particular type of job (e.g. software engineer) List of other Linkedin members with their profiles who exemplify particular roles well
Would you be interested in viewing a set of recommended courses (Udacity, Coursera, etc..) generated based on the skills you are missing in order to be a top candidate for a particular type of role?	Yes/No
Would you be willing to provide data to Linkedin about specific details of your employment history (e.g. salary at previous company) in order to access industry/role/location – specific data?	Yes/No
Do you often experience any of the following frustrations during an interview process?	Poor communication, lack of a sense for length of process, never hearing back after an interview, no feedback provided when explicitly rejected, put considerable amount of time into a project/assessment and feel the company used you for "free work", other
Please describe any additional frustrations with the job search and/or interview process that you have encountered	Open answer
How did you find your last job? Which tools/methods did you use? Which "worked"? Please provide as many details as you wish to share	Open answer
Thank you for completing the survey. Please use this space to provide any additional comments, ideas or frustrations	Open answer

9 APPENDIX B: ORIGINAL JOB DETAILS PAGE



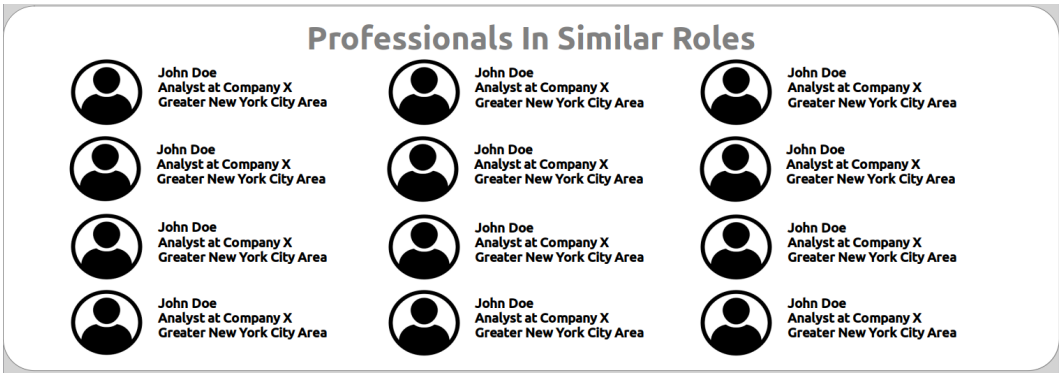
10 APPENDIX C: JOB QUALITIES MODULE

Job Qualities	
Base Salary Estimate	$107,000- $177,000
Flexibility	Most of the time
Predictable Work Hours	Sometimes
Teamwork	50% of time
Positional Growth	Avg. 1.5 years until promotion
Travel	0%
Work From Home	25%-50%

You Give Data, You Get Data
Unlock Additional Insights

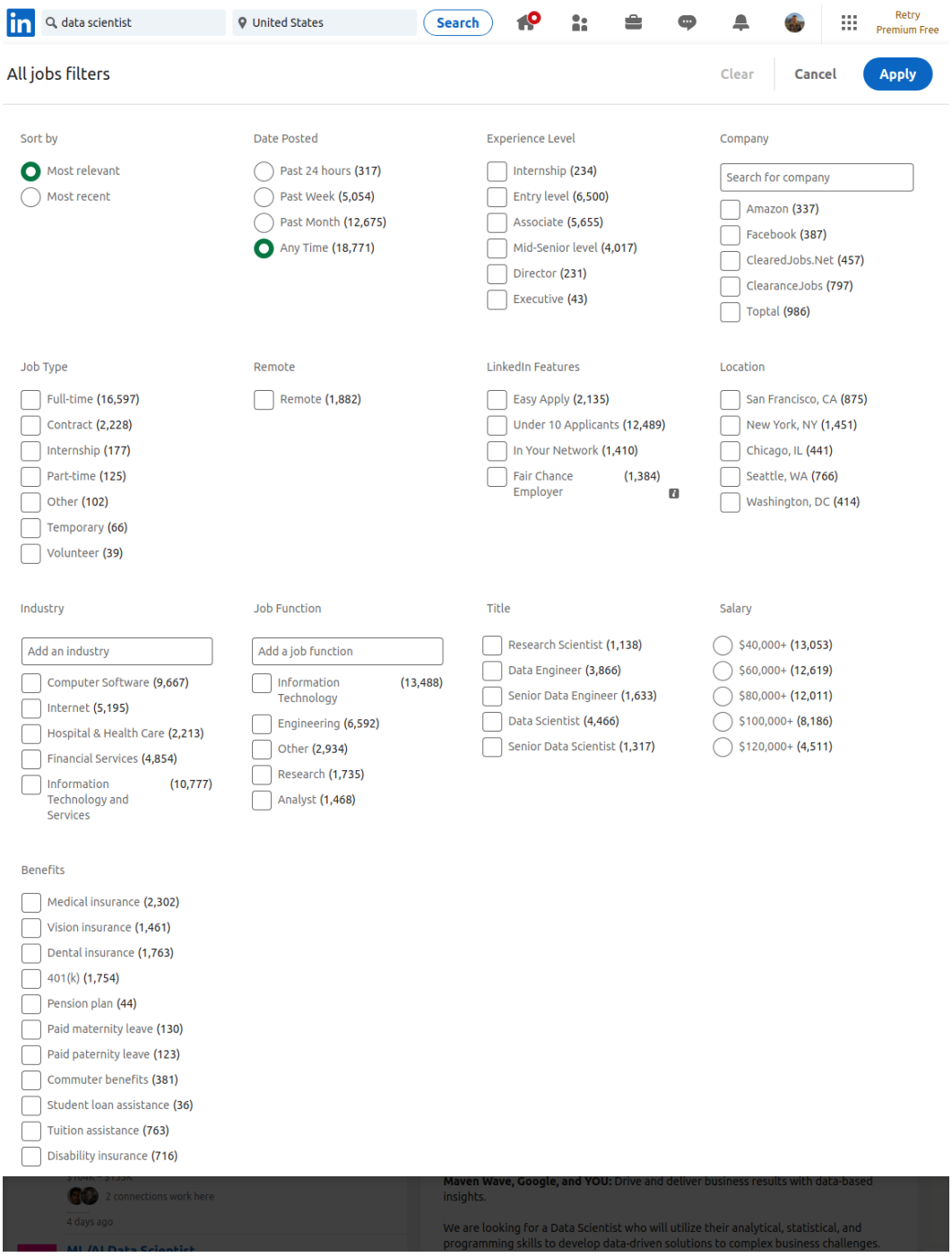
11 APPENDIX D: ABOUT COMPANY MODULE

12 APPENDIX E: PROFESSIONALS IN SIMILAR ROLES MODULE

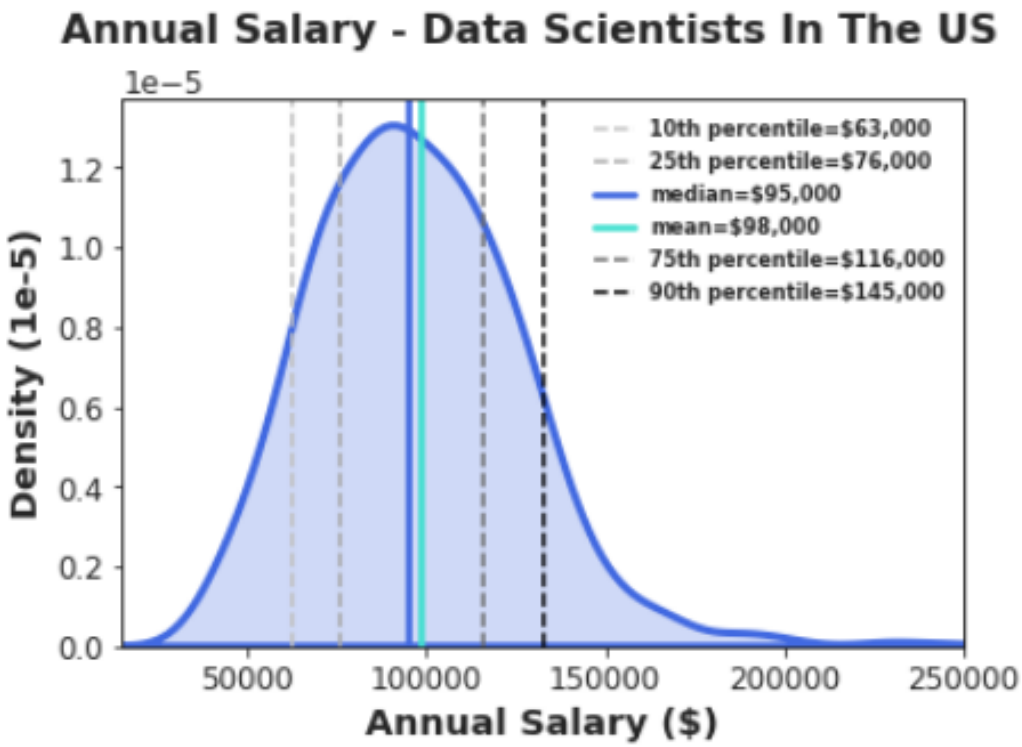


13 APPENDIX F: TOP CONNECTIONS MODULE

14 APPENDIX G: ORIGINAL ALL FILTERS WINDOW



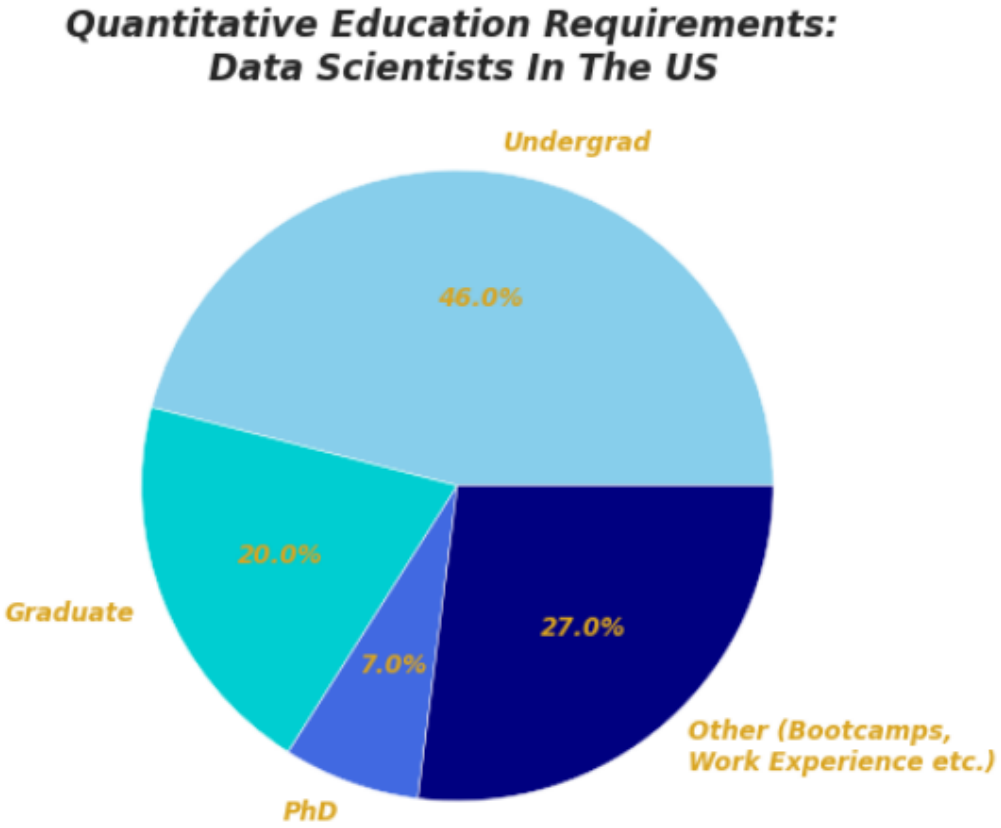
15 APPENDIX G: ANNUAL SALARY



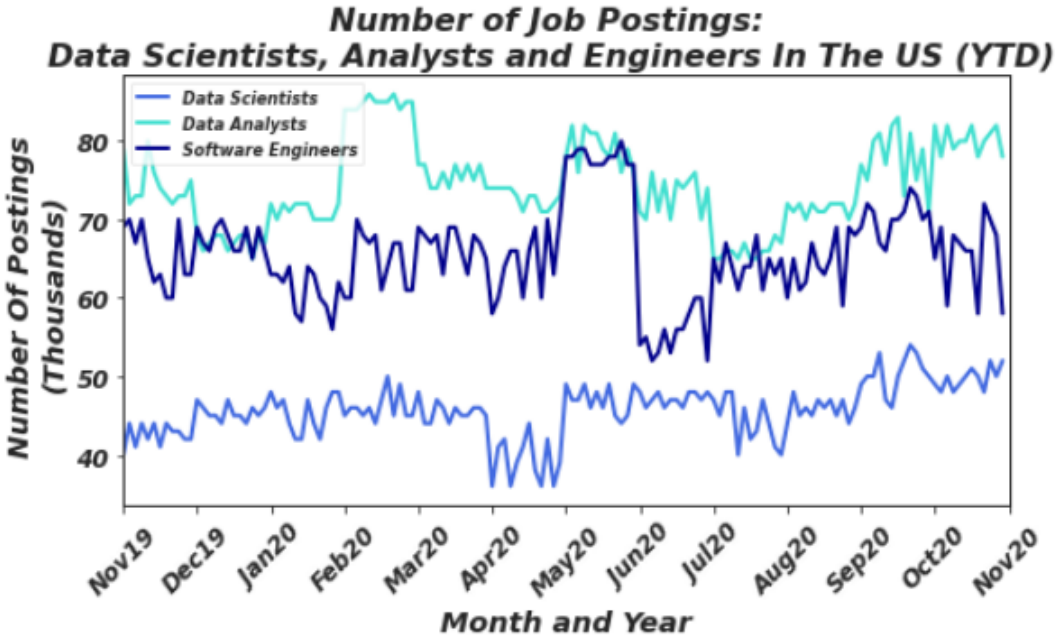
16 APPENDIX H: BENEFITS

Benefits Offered – Data Scientists In The US	
Medical Insurance	85%
Vision Insurance	85%
Dental Insurance	85%
401(k)	75%
Pension plan	35%
Paid maternity leave	90%
Paid paternity leave	25%
Commuter benefits	50%
Student loan assistance	30%
Tuition assistance	45%
Disability Insurance	40%

17 APPENDIX I: EDUCATIONAL REQUIREMENTS



18 APPENDIX J: NUMBER OF JOB OPENINGS



19 REFERENCES

[1] Duffin, E. (2020a). *Monthly civilian labor force in the United States from September 2019 to September 2020*. URL: https://www.statista.com/statistics/193953/seasonally-adjusted-monthly-civilian-labor-force-in-the-us/.

[2] Duffin, E. (2020b). *Monthly job openings in the United States from August 2019 to August 2020*. URL: https://www.statista.com/statistics/217943/monthly-job-openings-in-the-united-states/.

[3] *LinkedIn Job Search Reviews Product Details* (2020). URL: https://www.g2.com/products/linkedin-job-search/reviews#survey-response-4452846.

[4] Morgan, H. (2019). *Best Job Search Sites*. URL: https://money.usnews.com/money/blogs/outside-voices-careers/articles/best-job-search-sites.

[5] *Unemployment Rate* (2020). URL: https://fred.stlouisfed.org/series/UNRATE.