

Final Proposal: uResearch

Team C5 Frosted Flakes

Tony Deng, Zhijia (Johnny) Guo, Shannon Sullivan, Tianxin Xu, Caroline Win

What is the need?

Based on our interviews with professors and PhD students, we found that academics have trouble finding credible and specific content they need in a time-efficient manner while seeking information to inspire or inform their research. This is because they are overwhelmed by a multitude of information sources including academic paper databases (such as JSTOR, ACM, etc.), news aggregators, conferences, and social media sites. In addition, search tools for academic papers generally have limited customizability and force their users to rely on recognition and memory of paper titles, journals, and author names. Abstracts may provide general information about a paper but often miss specific information the researcher is curious about. Researchers and their students will ultimately read hundreds of papers and articles and end up feeling overwhelmed.

Why is this an important need to address?

Academics need to ensure that their research topic is unique and adds value before they invest their time and resources into it. To do this, they need to have a comprehensive understanding of the area in which they are conducting their research, which requires investing time and resources into exploring and understanding the existing dearth of research papers. They must keep up with the frontier of their field in order to find opportunities and proceed forward to actually conducting research and experiments. Encountering complications in the information-seeking phase due to lack of time or quality of information can create a bottleneck in their process or lead to a wasteful investment of time into a research topic that has already been explored.

What is the proposed solution?

Our proposal is an application called uResearch, a one-stop shop for researchers to get all of their important research material. A sort of “Pinterest for academics”, it will act as a centralized location for researchers to search, save, organize, and share papers. They will be able to browse and save links to articles from a variety of academic resources such as JSTOR, ACM, and many more. Users can find papers based on the details they remember and search for papers via a particular field, conference, author, or keyword. They will also be able to tag papers with additional keywords they find appropriate.

To ease the process of discovering relevant information, uResearch will provide users with weekly newsletters of the news, papers, and research findings in their topics of interest via email. Additionally, to increase sharing of knowledge and ideas among colleagues and collaborators, uResearch will provide a private forum. Users can post questions or comments to this forum, the contents of which are only viewable to users who are invited to their discussion

group. From these discussions, users can get feedback on their work and potentially forge collaborations and co-authorships.

Why will it address the need?

A central location that can both retrieve and store information will reduce the number of sites that academics need to visit when conducting research, making their workflow more efficient. Being able to reduce the amount of papers with improved filtering will also ease the information overload researchers currently experience and enable them to find the information they need in less time. Forums will increase effectiveness of work by providing researchers with feedback from colleagues and potential for collaboration.

Why is the solution feasible?

Researchers are frustrated with the search tools that they currently use because they believe those tools are not well-designed and do not give them the filtering options they want. If a tool existed that solved those problems, they would be willing to switch. Additionally, because researchers already use many online resources to conduct their research (e.g. Google Scholar) and to store and categorize papers (e.g. Mendeley), having an online tool that combines these two processes should be easy for researchers to adopt. A weekly newsletter would be able to pull from existing sources of information and utilize the filters and preferences the user specified to provide the most relevant content. Lastly, forums are a common mode of communication, and therefore many models already exist. Researchers we interviewed also stated they would love to be able to share their work and collaborate via forums as long as the privacy of the discussions is guaranteed.

References to Research

- Affinity Diagrams:
https://drive.google.com/drive/folders/0B9Mvk0EG_5EvckhoWlhfa0U5OFk
- Consolidated Models:
https://drive.google.com/drive/folders/0B9Mvk0EG_5EvZ3MySnBjZUhtYWws
- Designing from Affinities and Models:
<https://drive.google.com/drive/folders/0Bx62GFN9FWaXdU4wVnFMRk5EMk0>