Designing Next Generation Digital Employment Tools to Support Underserved Job Seekers

Research Experience for Master’s Students

Tawanna Dillahunt, Ph.D.
University of Michigan, School of Information

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Project Summary: Under the mentorship of UMSI professor Tawanna Dillahunt, this project aims to understand the requirements for and to begin building next-generation tools and applications that address the distinct needs of job seekers who live in low-socioeconomic regions, have limited education, or have low income. Specifically, the student will conduct a literature review of interventions and techniques used to increase and support self-efficacy and job search attitudes in the job-search process. Students will then lead an evaluation and analysis of one or more employment tools to analyze whether these tools lead to an increase in self-efficacy and job-search attitudes and why.

Rationale:
The rapid growth of Information and Communication Technologies and increased use of social media have created a "digital recruitment and employment divide" that works to the detriment of underserved job seekers or job seekers who live in low-socioeconomic regions, have limited education, or have low income. The rationale for the project is to mitigate these obstacles by: (1) Applying the Theory of Planned Behavior as a theoretical perspective and guide for evaluating digital employment applications; (2) Using well-known human-computer interaction methods, iteratively build and enhance three alternative digital employment and recruitment applications to evaluate their impact on job search attitudes, subjective norms (or social support) and perceived behavioral control (or self-efficacy) - all factors that could lead to job attainment. These applications include: (2a) DreamGigs, a proof-of-concept prototype that uses an open dataset provided by the Open Skills Project to extract and identify ways job seekers can build their skills to qualify for their ideal or dream jobs; (2b) Interview4, an existing non-mainstream tool that enables job seekers to conduct mock interviews and send these interviews to friends for feedback; and (2c) Review-Me, a pilot application built by the research team, deployed, and evaluated to enlist social support by connecting job seekers to volunteers for resume review. The student on this project will evaluate these tools as well as identify and report challenges that require policy intervention.

Academic Objectives:
The results of this project will lead to an articulation of additional external factors likely to affect attitudes
and self-efficacy for underserved populations seeking employment and uncover technical features that can manipulate these external factors. These results will provide important theoretical insights about what features are effective and ineffective in underserved populations, and why. In doing so, this project will fill a gap in the research on the challenges of using digital recruitment and employment tools among underserved populations and will ultimately lead to better digital employment and recruitment software.

**Student Role**
The student will serve as a research assistant and be involved in research meetings with Dr. Julie Hui, Research Fellow, and undergraduate software developers. Specifically, the student will conduct a literature review of interventions and techniques used to increase and support self-efficacy and job search attitudes in the job-search process. The student will then lead an evaluation and analysis of one or more employment tools to analyze whether these tools lead to an increase in self-efficacy and job-search attitudes and why.

**Mentor Plan**
I will meet with the student on a weekly basis and as needed. The student will also meet regularly throughout the project with the research team. I will ensure that the student has what is needed to understand the previous literature and how to conduct and analyze the planned studies.