Carnegie Mellon Robotics Institute

Executive Summary

Community Partner
Rachel Burcin
Student Consulting Team
Monica Chang
Justin Kufro
Penelope McKeefry
Darien Weems

Background

The Carnegie Mellon Robotics Institute is a world leader in the robotics domain. They seek to find and cultivate world-class robotics talent from around the world. The Robotics Institute Summer Scholars Program (RISS) is one way that they accomplish this goal. The program is designed to conduct research in all fields of robotics as well as provide transformative research experiences to undergraduate students from universities around the world.

Project Description

Project Opportunity

The RISS program has previously used the Carnegie Mellon School of Computer Science ApplyGrad system for accepting applications. Many applications were left uncompleted because the application process lacked clarity. They would then export these applications and perform the review and selection processes through the use of spreadsheets and other manual means. The project opportunity was to integrate all processes into one system, as well as find ways to automate unnecessary manual work.

Project Vision

Our project vision was to give the RISS program greater visibility into robotics talent as well as reduce bias in student selection. The system adds clarity to the application process, concentrates applicant review and acceptance into a single medium, and automates many previously manual procedures.

Project Outcomes

Our major outcomes were the integration of internal and external processes, a streamlined application process, and several methods of reducing bias. We were able to integrate the applicant banding process, automate review assignments, have applicant reviews and selection be completed within the system, and automate normalization of applicant scores. We were able to streamline the application process mainly through providing detailed hints where needed that can be tweaked later by an administrator. To

reduce bias, we disclosed information based on the user's role and status of the current application period, as well as using grading criteria to generate more objective composite scores.

Project Deliverables

The deliverables include a link to the GitHub repository that includes all of the code used in the system as well as all of its design and implementation documentation. The application can be accessed in any browser through the link apply.riss.ri.cmu.edu.

Recommendations

We recommend that RISS hire an IS student as an intern this summer to conduct more user testing and make the necessary tweaks that come up before the web app gets put to use for the first RISS application period on October 1st. After that point, we recommend RISS hire another intern to perform periodic system maintenance.

Student Consulting Team

Monica Chang served as the client relationship manager. She is a third-year student majoring in Information Systems, as well as Human-Computer Interaction. She will be working as a user experience designer at Dick's Sporting Goods this summer.

Justin Kufro was the quality assurance manager. He is a third-year student majoring in Information Systems. This summer he will be interning at The MITRE Corporation for his fourth year.

Penelope McKeefry served as the client transition manager. She is a fourth-year student majoring in Information Systems with a minor in Business. She will be working full-time as a software engineer at Procore Technologies starting this summer.

Darien Weems served as the project manager. He is a third-year student majoring in Information Systems with a minor in Game Design. He will be working on an independent software project this summer.