

Carnegie Mellon University Office of Disability Resources

Executive Summary

Community Partner

Catherine Getchell

Student Consulting Team

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Luke Blackwell

Anika Sharma

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Background

Carnegie Mellon University's (CMU) Office of Disability Resources supports students and visitors with disabilities by providing accommodations to ensure equal access to academic and campus activities. The team includes professional staff, student workers, and volunteers, with a mission to foster an inclusive campus culture. They coordinate proctoring services during final exams and ensure compliance with accessibility standards.

Project Description

Project Opportunity

The Office of Disability Resources faces challenges in scheduling and managing proctors for more than 700 exams across multiple shifts due to its time-consuming, error-prone manual process. Key challenges include: inefficiencies in shift assignment, required FERPA and WCAG 2.2 compliance, inability to match assignments with staff experience, lack of automated notifications, and volunteer coverage on evening and weekend shifts. A new system is needed to automate and optimize scheduling while ensuring accessibility and compliance.

Project Vision

The automated scheduling system is a Google Sheets-based solution with automation scripts for managing proctor schedules. This system collects availability, optimizes shift assignments, and sends automatic calendar invites – all while ensuring FERPA and WCAG 2.2 compliance. The solution will improve efficiency and reduce manual errors while integrating with existing tools.

Project Outcomes

We replaced the Office of Disability Resources' manual proctor scheduling process with an automated, sustainable system using Google Forms, Sheets, Calendar, and Apps Script, reducing scheduling time from two months to under an hour per exam cycle and eliminating manual communication errors. We conducted usability sessions, delivered clear documentation, and trained staff to ensure long-term system ownership without requiring technical expertise. The process shifted from manual scheduling to a streamlined

semi-automated workflow where staff collect availability, generate draft schedules via an optimization script, and send calendar invites with one click.

Project Deliverables

Project deliverables include the actual scripting concerned with creating an optimized proctor schedule and sending automatic calendar invites, a revised proctor availability form, as well as instructions for use and documentation of the solution.

Recommendations

Recommendations for our community partner and potentially any future developers involved creating a feedback mechanism for proctors to motivate and inform future modifications to the solution, as well as a more fully developed guide for our client to independently add in new fields or constraints to the proctor availability form.

Student Consulting Team

Gabriel Aguirre is a third-year student studying Information Systems with a minor in Computer Science. He served as the team's Developer and will be working as a Quantitative Researcher this summer.

Luke Blackwell is a fourth-year student studying Information Systems with a minor in Information Security Privacy and Policy. He served as the team's Project Manager and will be joining Becton Dickinson as a Security Engineer upon graduating.

Anika Sharma is a third-year student studying Information Systems with a concentration in Data Analytics. She was the team's Quality Assurance Manager and is an incoming Data Analyst Intern at Accenture.

Amanda Zhu is a third-year student studying Information Systems with an additional major in Human-Computer Interaction. She served as the team's Client Relations Manager and is an incoming Product Management Intern at Paramount.