

PROJECT 02

Internship Matching Automation

Jefferson County Business Innovation & Technology

3–5 students

Company background

Jefferson County Business Innovation & Technology (BIT) provides technology-based information systems and communication services to the County and its residents so they can accomplish their business objectives. BIT supports Jefferson County's vision of innovative, efficient, equitable, and quality public services through innovation, collaboration, and efficient and secure service delivery. The Innovation Team partners with County departments to evaluate and implement technologies that improve services, strengthen data-informed decision-making, empower employees, and advance strategic collaboration.

Problem statement

How might we automate the internship matching process to improve efficiency, consistency, and scalability while preserving staff oversight?

Problem context

The internship matching process currently relies on handwritten student forms and a manual review of student and project information, making the process time-consuming and difficult to scale as participation grows. Handwritten forms can be difficult to interpret and require manual data entry, increasing the risk of inconsistent or inaccurate data during the matching process. With approximately 40–60 student matches each cycle, the current approach requires significant staff effort and can lead to inconsistencies in how students are matched to projects.

Description of the work to be done

- Work with Jefferson County stakeholders to document the current internship intake and matching process, including student information, project information, matching criteria, constraints, and staff decision points.
- Design and develop a structured digital intake process that replaces or reduces reliance on handwritten forms and minimizes manual data entry.
- Create an automated matching approach that uses available student and project information to generate consistent, explainable match recommendations.
- Build a staff-facing review workflow that allows staff to inspect recommendations, identify conflicts or missing information, adjust matches, and approve final placements.
- Test the system using representative data and evaluate its accuracy, usability, consistency, and potential to reduce staff effort for approximately 40–60 matches per cycle.
- Document the matching logic, configuration options, user workflow, system limitations, and recommendations for future development or implementation.

Desired student skill set

Students are expected to learn new technologies and languages during the course. The following interests or skills would be helpful, but are not intended as prerequisites:

- Interest in algorithms, optimization, data modeling, databases, or decision-support systems.
- Experience or interest in full-stack application development and accessible form design.
- Ability to translate business rules and staff judgment into clear, configurable system requirements.
- Comfort learning new technologies, libraries, or programming languages as needed.

Work location and participation

Jefferson County Business Innovation & Technology is located at 3500 Illinois Street, Laramie Building – Suite 2500, Golden, Colorado 80419. The expected remote, hybrid, or on-site work arrangement has not yet been specified and should be confirmed before submission. If on-site work is required, mileage expectations should follow the course guidance.

Confidentiality and intellectual property

No non-disclosure agreement requirement has been specified. No requirement to assign intellectual property rights to Jefferson County has been specified; under the course's stated default, students will retain ownership of their work and all artifacts produced unless the proposal is updated before submission.