

City of Idaho Springs

CS Field Session Proposal (CSCI 370)

Colorado School of Mines • Fall 2026

Project Title	Idaho Springs Economic Impact Dashboard
Primary Stakeholder	City of Idaho Springs
Submitting Organization	City of Idaho Springs
Contact	Sadie Schultz, Director, Business & Community Promotions Board
Preferred Team Size	3–5 Students
Work Location	Fully Remote; optional in-person in Golden or Idaho Springs
Internship Potential	Continued engagement possible post-Field Session

Project Background

During the Summer 2026 Colorado School of Mines Field Session, a student team successfully designed and developed the initial version of the Idaho Springs Economic Impact Dashboard in Microsoft Power BI. The dashboard established a framework for visualizing community and tourism metrics using data from Placer.ai and other economic indicators.

The initial dashboard demonstrated the value of consolidating disparate datasets into a single decision-support platform for city leadership, local businesses, grant writing, tourism planning, and economic development.

The next phase of the project focuses on transforming the prototype into a sustainable, production-ready business intelligence platform.

Rather than manually importing datasets and rebuilding reports, the City seeks to automate data collection, streamline data preparation, expand available datasets, and create a long-term architecture that can easily be maintained by City staff.

This project will allow Idaho Springs to continue building one of Colorado's most comprehensive local economic intelligence systems while giving students experience designing real-world data engineering and business intelligence solutions.

Description of Work to Be Done

The Fall Field Session team will build upon the existing dashboard developed during Summer 2026.

The emphasis of this phase is automation, scalability, and maintainability rather than dashboard design.

The project consists of four major components.

1. Expand Data Integration

Continue integrating new data sources into the existing Power BI model, including:

- Placer.ai visitation data
- City sales tax data
- Lodging and hospitality metrics
- Mighty ARGO ridership
- Trail usage statistics
- Business licensing and occupancy data
- Census and demographic information
- Additional publicly available economic datasets

Students will evaluate opportunities to connect directly through APIs where available while creating standardized import processes for data sources requiring manual uploads.

2. Build Automated ETL Workflows

Design and implement repeatable Extract, Transform, Load (ETL) processes that minimize manual work required by City staff.

Possible components include:

- Automated Power Query workflows
- Python automation scripts
- API integrations
- Scheduled refresh processes
- Data validation routines
- Error reporting
- Version-controlled transformation scripts

The objective is to reduce routine dashboard maintenance from hours of manual work to a simple refresh process.

3. Improve Dashboard Performance & Scalability

Evaluate the existing Power BI model and improve:

- Query performance
- Data model efficiency
- Relationship architecture
- Documentation
- Naming conventions
- Security and permissions
- Report organization

Students will optimize the dashboard so it can continue growing as additional community datasets become available.

4. Develop a Sustainable Administrative Framework

One of the City's primary goals is ensuring future staff can easily maintain the dashboard.

Students will develop:

- Data dictionary
- ETL documentation
- Dashboard maintenance guide
- Refresh procedures
- Data source inventory
- User documentation
- Troubleshooting guide

The final deliverable should allow City staff to update the dashboard with minimal technical expertise.

Desired Outcomes

By the conclusion of the project, the City hopes to have:

- A fully functioning Power BI dashboard
 - Automated data refresh processes
 - Expanded economic datasets
 - Standardized ETL workflows
 - Comprehensive documentation
 - A scalable architecture for future development
 - A long-term business intelligence platform supporting economic development and community planning
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Desired Skill Set

3–5 students. A team of four is ideal, allowing for division of work across data pipeline, front-end development, geospatial/analytics, and documentation/presentation without overstaffing a focused project.

The Students interested in the project should have experience or interest in:

Core Technical Skills

- Microsoft Power BI
- Data Modeling
- Power Query
- SQL
- Python
- ETL Design
- API Integration
- Data Cleaning
- Database Design
- Business Intelligence

Helpful Experience

- Microsoft Fabric
- Azure
- Power Automate
- Git
- REST APIs
- Geographic Information Systems (GIS)
- Data Visualization
- Statistical Analysis

Soft Skills

Students should enjoy:

- Working with real-world datasets
 - Solving automation challenges
 - Building sustainable systems
 - Documentation
 - Collaboration with public-sector organizations
 - Translating technical solutions into tools non-technical users can maintain
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Potential Internship Opportunity (Optional)

There is meaningful potential for continued involvement beyond Field Session. The City of Idaho Springs anticipates ongoing needs for dashboard maintenance, new data integrations, and expanded analysis modules as the trail system continues to build out through 2027 and beyond. Depending on the results of the project, students who demonstrate strong performance during Field Session could be considered for paid part-time or summer internship engagements. The Mighty Argo Cable Car team and local business improvement organizations have also expressed interest in partnering on expanded future analysis.

Location of Work

Work can be completed fully remotely. The team will participate in periodic virtual check-ins with City of Idaho Springs staff, leadership, and partners. Optional in-person site visits to Idaho Springs (approximately 35 miles west of Denver on I-70) are encouraged but not required. Seeing the trail system, the gondola, and the skatepark firsthand tends to be inspiring. Students should plan for at least one site visit at project kickoff.

Why This Project Matters

Communities increasingly rely on data to guide investment decisions, secure grant funding, evaluate tourism performance, and measure economic growth. Idaho Springs has already invested in creating a centralized dashboard; this project focuses on making that investment sustainable.

Students will contribute to a tool that directly supports:

- Economic development strategy
- Tourism planning
- Grant applications
- Business recruitment
- Community reporting
- Long-term performance measurement

Rather than building another prototype, students will help transition a successful pilot into an operational business intelligence system used by City leadership and community partners.