




JVA, Incorporated
1319 Spruce Street
Boulder, CO 80302
303.444.1951
info@jvajva.com

COMPANY BACKGROUND


www.jvajva.com

JVA, Incorporated (JVA) is a Colorado structural, civil, and environmental consulting engineering firm. Since 1956, JVA has provided engineering services to architects, owners, municipalities, and special districts for building, site development, and water/wastewater projects throughout the Rocky Mountain area and nationwide. The firm's team consists of over 140 engineers, designers, and administrative professionals. JVA staff hold professional registrations in most states and many are members of industry associations and professional organizations.




STRUCTURAL ENGINEERING

JVA's structural department provides engineering services for new construction, renovation, and historic preservation projects across the United States. We also offer forensic engineering services to evaluate the performance of existing buildings.



CIVIL ENGINEERING

JVA's civil department provides engineering for a variety of services including site development, commercial and institutional sites, residential, parks, trails, and sports fields. We also provide utility infrastructure, drainage control, roadway and parking area design services.



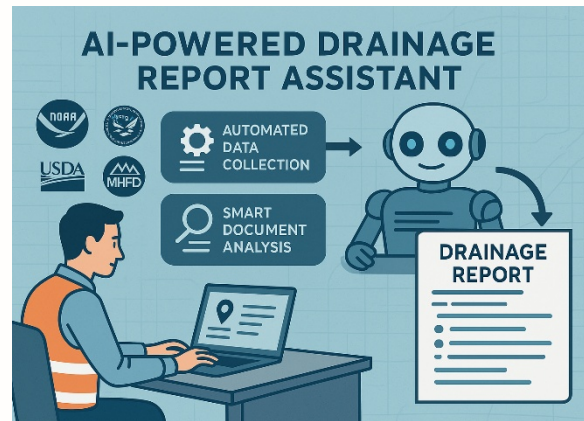
ENVIRONMENTAL ENGINEERING

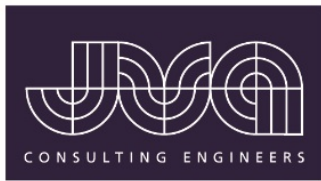
JVA's environmental department provides engineering services to municipalities, special districts, and private clients with a focus on water treatment and distribution and wastewater treatment and collection. These services include planning, design, permitting, funding assistance, and construction administration.

PROJECT SUMMARY

Drainage reports are a critical component of our Civil project design process, yet they are time-consuming and require engineers to manually gather data from multiple sources, review extensive documentation, and ensure compliance with specific municipal regulations. The process is not only inefficient but also prone to inconsistencies, leading to delays and potential rework.

We would like to develop an **AI-powered drainage report assistant** that will streamline this process by automating data collection, reviewing relevant documentation, and drafting structured reports based on various municipal drainage requirements. The application will be designed with an intuitive GUI where users enter a project location, triggering automated data retrieval and report generation.





KEY FEATURES

Automated Data Collection or User Provided – Pulls relevant information from trusted sources such as:

- NOAA (National Oceanic and Atmospheric Administration)
- FEMA (Federal Emergency Management Agency)
- USDA Web Soil Survey
- MHFD (Mile High Flood District)
- Municipality-specific drainage requirements
- USFWS Wetlands Mapper
- Google Maps for roadway and boundary data
- GIS data layers



Smart Document Analysis – Reviews and extracts insights from:

- Geotechnical reports
- Survey data
- Project Specific runoff calculations and drainage maps

Municipality-Based Report Structuring – Generates a structured outline based on local drainage requirements, ensuring compliance from the outset.

AI-Assisted Report Drafting –

- Trained on years of past JVA drainage reports to identify patterns and best practices.
- Interactively asks engineers key questions to fill in critical project-specific details.
- Generates a preliminary report, leaving placeholders where additional input is required.

KEY SKILLS

- Python Programming
- API Integration
- AI/ML Model Implementation (Azure AI)
- Data Processing
- GUI Development
- Web Scraping

TEAM SIZE

We expect this work to be more suited to a team of 5.

RESOURCES

As part of our project support, JVA will provide server and data base infrastructure to facilitate the application development. Data resources and subscriptions can be provided contingent upon pricing and usage requirements.



MEETINGS & LOCATION

JVA is based in Boulder, with offices located in Denver, Fort Collins, Winter Park, and Glenwood Springs. We'll be available to meet with the student project team through bi-weekly video calls, with the option to arrange one or two in-person meetings at either our office locations or your campus as needed.

INTELLECTUAL PROPERTY

Students participating in this project will be asked to sign an agreement assigning ownership of all resulting intellectual property to JVA.

PROJECT CONTACTS



Kevin Huemann
Senior Project Engineer
(303) 565-4947
khuemann@jvajva.com



Dylan Dunn
Project Engineer
(720) 975-1434
ddunn@jvajva.com



Howard McHenry
Principal
(720) 352-4934
hmchenry@jvajva.com



James Spung
Senior Project Manager
(970) 404-3085
jspung@jvajva.com



Sharon Procopio
Project Manager
(303) 565-4932
sprocopio@jvajva.com



Noah Diegel
IT Director
(303) 565-4951
ndiegel@jvajva.com