

# Douglas Krouth

Software Engineer

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GitHub <https://github.com/DouglasKrouth>

## Experience

### Software Engineer

Jun 2023 – Present

CIBO Technologies

- Maintained and provided code reviews on environmental modeling software services using Python, Scala, and Kubernetes.
- Developed Python and Scala simulation auditing pipelines used to apply for global carbon registry programs.
- Implemented and maintained continuous integration (CI) workflows using Jenkins, Docker and Tekton.
- Responsible for maintaining Kubernetes Ray clusters and Python machine learning stack for a team of researchers.
- Maintainer of multiple Python clients used to interface with geospatial REST services.
- Created documentation and training materials related to internal Kubernetes infrastructure and programming best practices.

### Software Engineer

Mar 2022 – Jun 2023

Schneider National Inc.

- Back-end developer for a Flask-based optimization engine prototype used by 20 internal associates.
- Primary maintainer of a zero-downtime Java application running on Red Hat Enterprise Linux responsible for hourly scheduling of approximately 10,000 shipment opportunities across 3 lines of business.
- Implemented a Python text processing workflow that saved \$40,000 USD in annual consulting expenses.
- Coordinated project management for a team of software developers working on a cloud-based machine learning product using Azure, Python and Docker.
- Responsible for architecture reviews and performance analysis of data science and scheduling models.

### Associate, Data and Reporting Team

Oct 2021 – Mar 2022

HORNE – Government Services

- Responsible for development and administration of grant funding reports for state and federal government stakeholders using Python, Microsoft Power BI, and MS SQL Server.
- Maintained 10 Python web scrapers used to generate funding datasets on Azure virtual machines.

### Petroleum Data Science Intern

Jun 2020 – Dec 2020

Kwik Trip, Inc.

- Worked with financial and petroleum analytics teams to analyze current and potential marketing trends across 800+ store locations using MS SQL Server databases, Power BI reports, and Python.
- Winner of Kwik Trip team undergraduate applied data science competition.

## Education

### B.S. Applied Mathematics; Minor in Computer Science

Sep 2017 – Aug 2021

University of Wisconsin - La Crosse

- Research grant recipient – USGS, UWL resource management and Topological Data Analysis partnership

## Projects

- Freelance Microsoft Office 365 admin and Power BI development for McMurphy Homes in Gulfport, MS
- Text processing with Python for community resource, funding requests (La Crosse Habitat for Humanity, La Crosse County)

## Skills

### Programming Languages

Experienced: *Python, Bash, SQL*    Competent: *Scala, Java*    Learning: *Rust*

### Software / Tools

Linux (Ubuntu, Alpine), Docker, Kubernetes, Git, Argo CD, AWS (S3, CodeArtifact, ECR, EC2), Helm, Vim