ALEC **BRAZEAU**   SOFTWARE ENGINEER

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EMPLOYMENT

Dewberry Engineering

Principal Software Engineer - 2020 to Current

- Conceptualize, build and test full-stack web applications.
- Collaborate with project managers and external stakeholders to architect solutions for production at scale.
- Senior subject-matter expert on geospatial data, algorithms, operations and workflows.
- Administrate company GitHub.
- Oversee and implement cloud computing strategy.
- Work fluidly across languages and tools, selecting the technology that best fits project requirements.
- Conduct code review and develop technical work-streams for junior employees.

Software Engineer - 2018 to 2020

- Automate workflows and develop RESTful APIs to support web applications and data processing pipelines.
- Lead organization-wide SWE community of practice.

The Nature Conservancy

Analyst - 2016 to 2018

- Developed the first state-wide (Colorado) carbon sequestration baseline assessment using Python GIS libraries.
- Utilized Markov Chains and Monte Carlo simulations to project sequestration into the future.

SELECTED PROJECTS

NOAA AIS Vessel Traffic Download System (link)

- Designed and implemented back end database and ETL operations for national boat and shipping traffic data, consuming and serving 8 billion points for public download and use.
- *Tech Stack: PostgreSQL, Redis, Express.js, Preact, Docker, Deployed on Azure Cloud Services*

Virginia Coastal Resilience Master Plan (link)

- Produced 5+ TB of high quality engineering data to act as the basis of the Commonwealth of Virginia's Coastal Resilience Master Plan. Refactored and deployed the front end Coastal Resilience Web Explorer
- *Tech Stack: Go REST API, Vanilla JS, Webpack, Docker, Traefik, PostgreSQL, Python , Deployed on AWS*

Floodcast Dashboard (link)

- Architected a custom, web-map based dashboard for State Departments of Transportation to predict how flooding will impact transportation assets in real-time.
- *Tech Stack: ReactJS, Mapbox GL, PostgreSQL, Go REST API, Docker, Traefik, Deployed on AWS*

BucketView (link)

- Conceptualized, developed, and deployed an open-source alternative to Yarkon S3 using Goofys and Flask.
- *Tech Stack: Python, Flask, Goofys, AWS S3, Traefik, Deployed on AWS*

SKILLS

LANGUAGES: Go (Golang), TypeScript, JavaScript, Python, SQL, Bash
FRAMEWORKS: React, Flask, Node.js, Webpack, RESTful APIs, web3.js, Django
TECH: Cloud Services (AWS, Azure, GCP), ElasticSearch, Docker, PostgreSQL, Kubernetes, Linux, Redis, Continuous Integration/Deployment

EDUCATION

University of Denver
Bachelor of Science 2016

University of Colorado, Boulder
Master of Science Environmental Science 2017