ALEC **BRAZEAU**
SOFTWARE ENGINEER

✉ alec.g.brazeau@gmail.com ⊕ https://alecbrazeau.com ☎ 630-327-2382 in alecbrazeau ⌨ albrazeau

EMPLOYMENT

Dewberry Engineering — **Senior Software Engineer** · 2018 to Current

- Design, develop, test, deploy, maintain, and improve micro-services architecture for 10+ REST-based cloud applications that merge innovation and efficiency with big-data requirements.
- Conceptualize, build, and deploy scalable and performant Go programs on AWS infrastructure that processes 90 million+ of data points in an on-demand manner.
- Administrator of company GitHub, conducting regular code review and outreach to colleagues across 8 teams to discuss efficiency trade-offs and optimization techniques.
- Improve the performance, maintainability, and operations of code base by leading, refactoring, and upgrading projects using the latest open-source tools, technologies, and frameworks.
- Advise team as a subject matter expert in large-scale, automated ETL operations that maintain data quality/fidelity while operating efficiently in production.
- Conduct performance profiling and optimization of full front end to back end tech stack and develop solutions that maximize output and user experience.
- Work fluidly across languages (Go, Python, JavaScript, etc.) and tools (Docker, Kubernetes, Redis, etc.), selecting the language that fits project requirements and building competencies in any tech stack required.
- Collaborate with program managers to develop technical work-streams for junior employees.

The Nature Conservancy — **Graduate Consultant** · 2016 to 2018

- Developed first state-wide carbon sequestration baseline assessment through an in-depth geospatial/policy analysis using Markov Chains and Monte Carlo Simulations.   Publication (link)   AGU Presentation Abstract (link)

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, Python, JavaScript, SQL, Bash, HTML, CSS
COMPETENCIES: Distributed Systems/Concurrency, Scientific Computing, Cloud Services (AWS, Azure, GCP), Relational Databases, Data Pipelines/ETLs, CI/CD, Agile Development
TECH STACK: Docker, REST, Kubernetes, Micro-services, Redis, NoSQL, ReactJS, Webpack, Git, PostgreSQL

EDUCATION

University of Denver · Sept. 2012 to June 2016
Bachelors of Science Environmental Science 2016
Minor Geology 2016

University of Colorado, Boulder · Aug. 2016 to Dec. 2017
Masters Environmental Policy and Management 2017