alec brazeau

software engineer

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✚ who

A big picture thinker that still sweats the details;
I'm optimistic about the future and want to spend my life making tools that will help build a better tomorrow.

✚ what

Backend Software Engineer · Gridwise   2023 to Current
- Build and maintain event-driven microservice architecture supporting the Gridwise mobile app and analytics product line.
- Manage Google Cloud Kubernetes deployments using CI/CD, helm, and Github Actions.
- Overhaul legacy Python, Ruby, and PHP systems, refactoring them into Go.
- Interface closely with mobile developers, designers, and product in order to deliver new and impactful features that grow MAUs by ~20% a quarter.
- Architect and design a back end system that enables users to link bank accounts to their Gridwise account, allowing them to automatically track gig job earnings and expenses.

Senior Software Engineer · Dewberry Engineering   2020 to 2023
- Lead design and development of data-intensive applications used for geospatial analysis and planning:
  - Built a dynamic road assessment tool for the State of New Jersey to help prioritize infrastructure projects and planning.
  - Created an internal service that produces base elevation data for geospatial projects across company; pipeline crawls publicly available elevation datasets and updates PostgreSQL database to create a mosaic of best-available topographic data that can be queried, sliced, exported.
  - Designed pipeline to collect and analyze 50 billion real-time connected vehicle data points to assess evacuation activity during Hurricane Ian and inform disaster preparedness/urban planning studies.
  - Conceptualized and built a bespoke data management system, allowing users to search, tag, filter and export over 3.6 TB of data for the Texas General Land Office.
  - Overhaul the backend, pipeline, and user experience for State of Colorado's flood threat monitoring website that enables residents to check emergency weather status and projected impacts by location.
- Administrate company GitHub.
- Oversee and implement cloud computing strategy.
- Grew Computer Science and Informatics team into core business unit with 10 employees.
- Conduct code review and develop technical work-streams for junior employees.

Software Engineer · Dewberry Engineering   2018 to 2020
- Automate workflows and develop RESTful APIs for custom web applications and data processing pipelines.
  - Designed and implemented backend database and ETL operations for national boat and shipping traffic data, consuming and serving 8 billion points for public download and use.
  - 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 frontend Coastal Resilience Web Explorer.
  - Architected a custom, web-map based dashboard for State Departments of Transportation to predict how flooding will impact transportation assets in real-time.
  - Conceptualized, developed, and deployed an open-source alternative to Yarkon S3.
- Lead organization-wide SWE community of practice.
- Establish Computer Science and Informatics team within organization

Senior Software Engineer · Personal Projects   July 2022
- NFT Arbitrage Bot
  - Created an automated bot that searches for, identifies, and executes on arbitrage opportunities across different NFT marketplaces.
- Polygods NFT Project
  - Collaborated on the development of the NFT minting website, allowing users to link their wallet and successfully mint a Polygod.

✚ how

LANGUAGES	FRAMEWORKS	TECH
Go (Golang)	React	Cloud Services (AWS, Azure, GCP)
Python	Flask	Docker
SQL	Node.js	PostgreSQL
Bash	Webpack	Redis
TypeScript	RESTful APIs	Kubernetes
JavaScript	Async event driven architecture	CI/CD
	Django	ElasticSearch
	web3.js	Helm

✚ education

University of Denver
Bachelor of Science 2016

University of Colorado, Boulder
Master of Science Environmental Science 2017