Braden Zingler

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Computer and software engineer with 2+ years of experience architecting and developing scalable serverless systems in AWS, optimizing CI/CD pipelines, and deploying cloud infrastructure. Proven ability to reduce costs, improve performance, and deliver reliable end-to-end systems. Interested in cloud infrastructure, web development, and game development.

PROFESSIONAL EXPERIENCE

Sinclair Broadcast Group   **May 2024 - Present**
Software Development Engineer   *Remote*

- **Owned end-to-end architecture and development** of a multi-platform authentication system (TV, mobile, desktop) using a custom Auth0 solution. Designed and integrated reusable NPM library with 100% test coverage and documentation, and advised leadership on technical direction and next steps.
- **Architected serverless backend in Typescript (AWS),** providing reusable authentication/multiplayer lobby services across multiple teams; delivered 100% test coverage and extensive documentation.
- **Led AWS account transition and domain management for new project websites,** ensuring smooth migration and reliable infrastructure setup.
- **Reduced average development cycle time by 30%** by optimizing existing pipelines to automate unit tests, end-to-end tests, and infrastructure deployments using Terraform in a Gitlab CI/CD environment.
- **Reduced AWS spending by thousands of dollars** by analyzing bills and suggesting improvements in architecture and practices.

Sinclair Broadcast Group   **May 2023 – May 2024**
Software Development Intern   *Remote*

- **Expanded accessibility of news stories through asynchronous AI text-to-speech pipeline** powering audio for news stories with event-driven reliability, automatic retries, and CDN delivered audio assets.
- **Reduced latency by 50% and cut costs by 200%** by optimizing AWS Lambda (Python) infrastructure for warm starts and replacing the existing OpenAI model.
- **Designed and implemented data aggregation/collection services** (AWS Lambda, BigQuery) to enable future in-house AI training, reduce latency, support in-depth analytics, and evaluate models effectively.
- **Eliminated tech debt and accelerated development cycles** by writing hundreds of automated unit and E2E tests, modularizing Terraform, and improving observability with NewRelic - exposing and removing redundant expensive service usage.

EDUCATION

University of Wisconsin | College of Engineering   **2022 - 2026**
B.S. Computer Engineering, Minor in Computer Sciences | GPA: 3.8   *Madison, WI*

- **Honors**: College of Engineering Dean's Honor List (Fall 2022, Spring 2023, Fall 2023, Spring 2024).
- **Relevant Coursework**: Software engineering, PCB design, microprocessor programming.

SKILLS & INTERESTS

- **Languages:** Typescript, Javascript, C++, C, Java, Go, Python.
- **Cloud/Infra:** AWS(Lambda, API Gateway, S3, DynamoDB), Terraform, Gitlab CI/CD.
- **Tools:** Jira, LucidChart, Confluence, Auth0, NewRelic, Git.
- **Areas of Interest:** Game development, optimization, cloud architecture.

PROJECTS

- **SkyDuel:** A real-time web game using WebRTC, Websockets, and PhaserJS where the objective is to battle your opponent in the sky.
- **Cochlea Simulator:** A real-time Python script running on a Raspberry Pi that translates frequencies into an LED strip to visually display how the cochlea translates sound waves into electrical impulses.
- **Multi-cycle Processor:** A 5-stage pipelined processor written in Verilog with basic caching and memory hierarchy capable of executing a custom ISA.