Glen Oakley

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Experience

Sr Software Engineer (SRE/Platform Focus)	**Discord**	June 2021 - Present

- Built a platform for managing software deployment across the company on a team of three, tying together disjoint build, deploy, and monitoring tools into a single system with Discord-specific behaviour, and worked with internal customers to focus on features that provided the greatest value to the business through fast iteration and stable tooling
- Deployed a zero-trust SSO infra access solution across Discord's fleet of thousands of servers, smoothly transitioning employees onto the new RBAC based system while meeting strict migration deadlines
- Developed best practices and tooling around cloud spend, distributing the work of cost tracking to the appropriate teams and allowing Discord to reduce observability spend by >10%
- Implemented a hybrid block storage solution on top of cloud hardware, cutting database read latency by 2x, reducing infrastructure complexity, and simplifying backup management - worked with representatives from Google Cloud to verify and promote the system to production

Software Engineer (SRE Focus)		Sept 2019 - June 2021

- Replaced instances of Apache Cassandra with ScyllaDB, minimising user impact, ensuring critical data integrity, and avoiding regressions throughout the process
- Built Terraform tooling to enforce consistent behaviour, simplify the workflow for users, and detect drift between the code and production infrastructure

Site Reliability Engineer	**Thumbtack**	July 2015 - Sept 2019

- Integrated service mesh technology into Thumbtack to enable increased performance visibility and new traffic shaping features, powered by Envoy Proxy and a custom control plane - involved the debugging of subtle networking and gRPC issues
- Created AWS virtual networks and supporting systems as part of a company-wide infrastructure update designed to isolate different environments and provide a more stable experience for developers and a more reliable product for users
- Built tooling on top of PostgreSQL to provide scrubbed production-like data to developers in near real time, leveraging Docker, ZFS, and AWS services to stream, snapshot, and run highly scalable PG instances
- Designed and implemented a canarying system for apps that allows for fine-grained control over traffic routing, supported by Nginx alongside a custom service and fully integrated with Thumbtack's CI system
- Led the effort towards uniform monitoring across engineering, replacing the brittle in-house solution with a hosted solution and developing monitoring best practices

Software Engineer		June 2014 - July 2015

- Designed and implemented product changes to improve the core matching system, including user-facing onboarding changes, re-evaluation of the incentives system, and criteria changes for notifications
- Re-designed part of the A/B testing system, routing data through Hadoop and reading/rendering the result of batch analytics jobs using a Go service (replacing the old monolithic Python service)

Technical Intern	**Nebula**	June 2013 - August 2013

- Enhanced Python-based unit and functional test suite to allow for quicker testing and the production of succinct but informative test results and code coverage
- Developed Collectd plugins to visualize physical and virtual machine usage through the Graphite realtime graphing system, allowing developers to easily identify when and where problems occur in the system
- Redesigned disk image building system (porting from Python to Make), removing redundancies and enabling partial builds, drastically reducing the build time in a key part of the system

Summer Technical Analyst	**Bank of America**	June 2012 - August 2012

- Designed and prototyped a secure file syncing application for iOS utilizing BoA cloud storage
- Began investigation into automated testing for the iOS team using Xcode's built-in tooling
- Configured internal Q&A platform for dissemination of information with custom SSO integration

Education

Ewing, NJ	**The College of New Jersey**	August 2010 - May 2014

- BS in Computer Science with a 3.73/4.00 GPA
- Courses: Advanced Algorithms, Microcontrollers, Cloud Computing, Computer Graphics, AI, HCI

Skills

- **Technologies**: *NIX, Docker, Postgres, Cassandra, Kubernetes, Terraform, Cloudflare, Datadog, Salt, Git
- **Cloud Services**: Cloudflare, Datadog, Sentry, AWS (DynamoDB, EC2, ECS, IAM, Route53, S3, SQS, VPC, Lambda), GCP (GCE, GKE, GCS, IAM, CloudSQL, Pub/Sub)
- **Languages**: Python, Rust, Haskell, C, Go, JavaScript, TypeScript, Bash, SQL
- **That Other Stuff ™**: Running, Flying Trapeze, Game Development

Projects / Contributions

Bandcamper — https://goakley.github.io/bandcamper/
- Software for keeping your Bandcamp library in sync with your local filesystem
- Required developing an independent Rust library for pulling credentials out of web browsers: https://crates.io/crates/bench_scraper

Snagfeather — https://snagfeather.studio/
- Personal indie label for game development projects

Affiliations

Executive Team	**Further Confusion / AAE Inc**	2020 - Present
Executive Team	**BABSCon (Harmonious Elements)**	2015 - 2018
Engineering Fellow	**Kleiner Perkins Caufield Byers**	2013
Chapter Board Member	**Association for Computing Machinery**	2011 - 2014