Daniel Mikhail

▬▬▬ Software Engineer

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▬▬▬ Experience

Verily Life Sciences (Alphabet), Software Engineer I *(Boston, MA)*   2022 - Present

Led full-stack development of two core healthcare platform components with feature flag-controlled deployments in a FHIR/GCP ecosystem. Technologies include: Go, React/TypeScript, GCP, FHIR, gRPC

- **Participant System**: Built a scalable internal service enabling Verily's developers to interact with simplified participant interface
  - Led refactoring of a core data model and system, improving maintainability through service modularization and third-party integration abstraction
  - Reduced testing cycle time by 75% through decoupling frontend/backend test suites in Consent System
  - Authored comprehensive developer guides and contract tests establishing best practices for service integration
- **Provider Console**: Led design and development of a modular frontend dashboard through iterative feedback loops with UX and Product teams
  - Established frontend architecture patterns by implementing core React/TypeScript components, creating a flagship MFE that became standard reference across 4+ teams
  - Broke down card implementation into modular Backend-for-Frontend (BFF) architecture enabling parallel development across junior engineers, reducing MVP delivery time by 50%
  - Built reusable UI components following UX specifications, maintaining a11y compliance standards, ensuring aligned quality expectations with Project Management

Verizon Media Group (Yahoo!), Software Production Engineer I *(Champaign, IL)*   2018 - 2021

Served as the production point of contact for data pipelines and tools built on the Hadoop Ecosystem. Technologies include: Python, Hadoop Ecosystem (Pig, Oozie, Spark), AWS, RedHat clusters

- Developed a full-stack monitoring tool for multiple Lambda architecture-based streaming pipelines, providing real-time visibility into pipeline health
- Escalate urgent feature requests across the pipeline, like new a security requirement (COPPA, GDPR, etc.), that was deployed ahead of schedule
- Formed a high level intuition of the pipeline to catch potential SLA misses early, and pass on tribal knowledge to newer Production Engineers
- Refined many operational skills and concepts: Key and group management, replication, load balancing, networking, CI/CD, and Linux Bash scripting

Projects

Details of everything listed below can be found at mikhaidn.github.io/Plokmin

Custom Elgato Stream Deck Controller

Developed custom Python HID Controller for Stream Deck hardware with cross-platform (MacOS, Windows) audio controls

Open Source Research

Increased the documented search space of two integer sequences (A100570 and A241922) on the OEIS by 6 orders of magnitude by taking advantage of bitmapping, multithreading, and other Python/Math gimmicks

Subject Primers

Original content created, based on frequently asked questions received over the years

- **The Unix Shell** - A simplified list of goals for learning the Unix Shell

- **Macarons** - A high level guide to making French Macarons

- **Competitive Smash Bros.** - Created accessible esports narratives of 'Smash Summit 11' for newcomers

- **STEM College Prep** - A collection of pre-college STEM resources

Skills

- **Languages**: Go, Python, TypeScript/React, Java, MATLAB, R

- **Infrastructure**: Docker/Kubernetes, GCP, AWS, CI/CD

- **Development**: API Design, Distributed Systems, BDD Testing

- **Domains**: Data Cleaning, Computer Graphics, Scientific Visualization

Education

2020 - 2024 **Masters of Computer Science**; University of Illinois at Urbana-Champaign

2014 - 2018 **BSc, Computer Science**; Rose-Hulman Institute of Technology *(Terre Haute, IN)*