Daniel Mikhail

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2022 - Present

Software Engineer at Verily Life Sciences (Alphabet) (Boston, MA)

Led full-stack development of two core healthcare platform components with feature flag-controlled deployments in a FHIR/GCP ecosystem:

- 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

Technologies: Go, React/TypeScript, GCP, FHIR, gRPC

2018 - 2021

Software Production Engineer at Yahoo! (Champaign, IL)

Served as the production point of contact for components of Yahoo!'s DSP advertisement pipeline and tools built primarily on the Hadoop Ecosystem or Amazon Web Service.

- Communicate blockers in-between developer teams, like new a security requirement (COPPA, GDPR, etc.) or data schema change 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
- Established a real-time monitoring system using Lambda architecture, providing critical visibility into pipeline health and performance metrics

Technologies: Python, Hadoop Ecosystem (Pig, Oozie, Spark), AWS, RedHat clusters

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

Knowledge Dumps

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

- Macarons A high level guide to making French Macarons
- The Unix Shell A simplified list of goals for learning the Unix Shell
- 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)