Matheus Duncan

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Designing and building performant web tooling that integrates and scales with existing software. Writing clean code with an emphasis on maintainability. Prototyping emergent technologies, including AI tooling. Interested in DevX, TUIs, and distributed systems. Currently enjoying hiking, basketball, and Sci-Fi novels.

PROFESSIONAL EXPERIENCE

Associate Software Developer — *Co-operators*   *09/2024 - Present*

❖ Principal contributor during development of internal job rotation platform, delivering 1.0 release 1 quarter ahead of schedule. Serves >600 users without significant downtime while integrating with Azure **GraphQL API**. Received VP-level recognition for successful launch

❖ Developed a calculation tool for quantizing insurance claims that integrates with enterprise insurance software to replace outmoded Excel spreadsheets with a web application written in **Typescript** and **React**. Calculates payments worth >$350MM annually. Greenfield to MVP release in 4 months

❖ Selected for 6-month DevOps rotation; implemented IaC using **Terraform** to migrate 12 applications from RedHat to **AKS**. Wrote vendor-agnostic configuration to enable CI pipeline migration from **Jenkins** to **Github Actions**, achieving 87% reduction in build times & saving ~300hrs of dev time annually

❖ Organized and heading weekly meetings with intern/junior/intermediate developers to facilitate knowledge transfer, propagate new ideas, write/update documentation, and collaborate on yearly developmental goals

❖ Spearheading **Generative AI** adoption in team by prototyping AI tooling to enhance existing workflows, advocating for *measured adoption* of AI programming tools (e.g. **Github Copilot**), and introducing new practices & conventions to improve quality of LLM output

Junior Software Developer — *Co-operators*   *04/2023 - 08/2023*

❖ Implemented functionality to allow linking of notes and documents in an enterprise **Java** application. Enabled adjusters to append information to all elements of a claim, simplifying the resolution process

❖ Wrote custom **SQL** procedures to eliminate need to manually create user roles when testing features in non-production environments, saving 8hrs of QA time weekly

Junior Software Developer — *Co-operators*   *01/2022 - 01/2023*

❖ Wrote unit and integration tests for an enterprise **Java** application to enable cloud migration. Resolved ~200 errors/warnings and improved unit test coverage to >95%

❖ Created custom **Splunk** webhooks in **Java Spring** to upgrade insufficient alert system for production errors. Automatically creates tickets and notifies relevant teams when errors occur, reducing incident response time by 40%

❖ Upgraded legacy web app for tracking status and documentation of non-production environments into a modern full-stack **React** app. Automatically detects server status and autogenerates documentation of server state. Exposes a custom **REST API** to allow for integration with other internal tools

EDUCATION

Bsc, Computer Science — *University of Alberta*   *09/2019 - 04/2024*

Key Courses: Programming Methodology, Database Management, Software Engineering, Software Quality, Data Structures & Algorithms, Information Retrieval, Web Architecture

Extracurriculars: University Food Bank, Computer Science Undergraduate Society, History & Classics Society

TECHNICAL PROJECTS

Pronunciation Practice Hub

❖ Collaborated with a local educational non-profit to build a full-stack **React**, **Django**, and **PostgreSQL** web app to help young students learn Arabic. Delivered cloud deployment with **CI/CD pipeline** in <4 months

Home Server

❖ **Linux** (Debian) home server built to easily host several web apps, including a media streaming server and personal site/blog. Applications containerized and deployed with **Docker**

❖ **Nginx** Web server capable of hosting sites on HTTPS protocol with SSL/TLS encryption. Uses a Cloudflare CDN for caching and localization

SKILLS

Tools

Splunk, Git, Docker, Kubernetes, Linux, PGAdmin, MongoDB Compass, Django, Github Copilot, Jenkins, Github Actions

Languages

MERN stack (MongoDB, Express, React, NodeJS), PostgreSQL, Javascript/Typescript, HTMX, GraphQL, Terraform, Common Lisp, Python, Java