Lucas M.K. Mayall

lucasmayall.com | resume@lucasmayall.com

Work Experience

Intermediate Full Stack Developer October 2023 – Present
Bright Health Software Society *Vancouver, BC (Remote)*

- Architected REST API for AI Ambient Scribe feature; integrated third-party transcription provider into EMR and built React audio component for real-time patient encounter summarization.
- Developed C# and Python ETL services to fetch, clean, and normalize clinical reference datasets from Health Canada REST APIs, collaborating with physicians to improve data quality and support safer clinical decision-making.
- Re-architected clinical reference dataset tables with per-column overrides, improving scalability and enabling seamless dataset updates.
- Migrated internal monitoring platform to TimescaleDB, reducing query latency from minutes to under one second and enabling controlled clinical dataset rollouts through deployment and query access features.
- Developed a Rust-based cross-platform updater with API versioning and server management interface, enabling rapid deployment of critical security fixes and feature updates across clients.
- Built a User Management Portal (ASP.NET, GraphQL, SvelteJS) to automate user provisioning across multiple clinic databases, Active Directory, and an internal MFA platform, eliminating up to 4 hours of daily manual support work.

Full Stack Developer June 2023 – October 2023
Fathom Scientific Ltd. *Vancouver, BC (Remote)*

- Developed SaaS platform for time-series visualization using React, Django, and PostgreSQL, enhancing UI features and backend optimizations for hydrological monitoring workflows.
- Engineered a distributed Python/Celery/RabbitMQ task queue to automate sensor data ingestion from remote devices over VPN, ETL CSVs to S3 across hundreds of sites, replacing manual workflows and freeing hundreds of man-hours for billable data analysis
- Led cross-functional project with the electrical engineering team to engineer an interface between the distributed task queue and remote embedded device CLI, enabling automated scheduled data retrieval and usage analytics.
- Developed a Dockerized OpenVPN server with a custom monitoring API, enhancing VPN reliability, enabling automated data collection, providing device connection analytics, and streamlining deployments.
- Administered AWS EC2 instances and S3 buckets; managed Cloudflare CDN and DNS configurations with CI/CD pipelines for high availability.
- Containerized core services with Docker, cutting deployment times, eliminating environment inconsistencies, and streamlining developer onboarding.

Part-Time Junior .NET Developer September 2022 – June 2023
Department of National Defence (Canada) *Esquimalt, BC*

- Implemented PDF form generation feature for C# WPF-based asset tracking system, cutting manual reporting by 80% for defense logistics workflows.
- Designed caching mechanism for asset lookups, accelerating queries 3x and reducing average DB load by 50%.
- Iterated Windows Forms UIs through stakeholder feedback cycles, delivering intuitive designs for streamlined data input and reporting.
- Authored and optimized SQL Server stored procedures for data aggregation, cutting execution times 50% with joins and indexes to support real-time asset management.
- Delivered all milestones remotely while balancing full course load, demonstrating adaptability in a classified environment.

Technical Skills

Languages: C#, TypeScript, Python, Rust, SQL (PostgreSQL, SQL Server), Bash, PowerShell
Frameworks/Libraries: ASP.NET, React JS, Django, WPF, Windows Forms, Svelte JS, Celery, GraphQL
Developer Tools/DevOps: Git, Docker, Bamboo, CI/CD pipelines, Azure, AWS (EC2, S3), Cloudflare DNS & CDN, OpenVPN
Databases / Data: TimescaleDB, PostgreSQL, SQL Server, ETL workflows, CSV processing
Other Skills: Linux System Administration, Product Photography, Remote Collaboration, Cross-functional Project Leadership
Hobbies: Rock Climbing, Wildlife Photography, Backcountry Snowboarding, Hiking, Backpacking, Home Lab

Education

BSc. Combined Major in Computer Science and Statistics September 2019 – April 2023
University of Victoria *Victoria, BC*