LUCAS M.K. MAYALL

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EDUCATION

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

TECHNICAL SKILLS

Languages: Python, TypeScript, C#, SQL, Bash, R, Lua
Frameworks/Libraries: React JS, Django, Django REST Framework, .NET, Windows Forms, Tensorflow
Developer Tools: Git, AWS, Docker, PostgreSQL, CloudFlare DNS & CDN, VS Code, Atlassian Suite
Other Skills: Linux System Administration, Product Photography
Hobbies: Rock Climbing, Mountain Biking, Hiking, Camping, Woodworking, 3D-Printing, Home Lab

EXPERIENCE

Full Stack Web Developer   June 2023 – Present
Fathom Scientific Ltd.   *Vancouver, BC (Remote)*
- Primary developer of a SaaS application for time series visualization using React JS, Django, and PostgreSQL.
- Oversaw end-to-end development, deployment, and ongoing maintenance of the web application.
- Administered AWS EC2 instances and S3 buckets, along with Cloudflare CDN and DNS, to ensure minimal downtime and robust security.
- Designed and implemented RESTful APIs using Django, enabling new features and integrations.
- Facilitated requirements-gathering meetings with company director to create clear development roadmaps.
- Diagnosed and resolved many performance bottlenecks in React and Django, improving load times by up to 80%.
- Researched and implemented a distributed task queue using Celery and RabbitMQ for automated analytics and data retrieval from field devices.
- Build custom containers for all services using Docker, enabling rapid deployment and development.
- Developed a containerized OpenVPN server with a custom API to enable automated data retrieval and monitoring of field devices.

Part-Time Junior .NET Developer   September 2022 – June 2023
Department of National Defence (Canada)   *Esquimalt, BC*
- Implemented a PDF automation tool into my unit's Windows Forms asset tracking software.
- Adeptness to quickly comprehend and work on multiple legacy .NET codebases.
- Performed Code Reviews; documenting findings and reporting to lead developers.
- Designed SQL stored procedures for data aggregation with an emphasis on performance.
- Worked remotely in a self-directed manner while maintaining a full course load.
- Successfully balanced work and school to reach all project milestones ahead of schedule.

IT Technician Co-op   April 2022 – September 2022
Department of National Defence (Canada)   *Esquimalt, BC*
- Achieved Federal Reliability security status
- Swiftly became an effective member of the team by quickly familiarizing with IT infrastructure and policies.
- Developed strong relationships with clients while identifying and resolving technical issues.
- Triaged and resolved inter-departmental roadblocks resulting in the revival of multiple stalled projects.
- Identified an opportunity to streamline and automate an asset management task with a decade-long backlog.
- Rapidly developed a prototype JavaScript web application to automate PDF form filling to automate this task.
- Was offered a position as a Junior .NET Developer to further develop prototype application.

PERSONAL PROJECTS

Git Commit Classification Machine Learning Model | *Python, Git, Tensorflow, Docker*   April 2023
github.com/Zerva5/474CommitML
- Created a machine learning model to classify if a given commit caused the bug from a known bug-fixing commit.
- Used Python to injest, pre-process, and vectorize code changes in over 360k Java commits.
- Developed and deployed custom Docker containers for distributed training on multiple systems.
- Employed unsupervised learning for encoder training to reduce feature space dimensionality.