

# Keanu Liwongan

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## Education

University of Waterloo   Computational Mathematics	2020 - 2025
<b>Relevant courses:</b> Computer design and organization, data structures and algorithms, object oriented programming, functional programming, linear programming, computational discrete optimization, graph theory, scheduling theory	

## Skills

- **Languages:** Python, Rust, C++, C, Java, SQL, TypeScript, JavaScript, HTML/CSS
- **Tools:** AWS, Docker, Docker Compose, Terraform, Serverless Framework, Redis, Ansible, Datadog, MongoDB, DynamoDB, SQLite, Linux
- **Frameworks:** React, Node, Express, FastAPI, Flask, pandas, maturin, PyO3, Tokio.rs, Prost, gRPC, OpenAPI, nginx

## Experience

<u>Milk Moovement</u>   <i>Software Developer Intern</i>	2024.09 - 2025.04
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- Predictive analytics and tools for milk supply chain for farmers, producers, and milk cooperatives across the US and Canada

<u>Milk Moovement</u>   <i>Platform Development Intern</i>	2023.09 - 2024.05
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- Implemented company-wide internal SSO solution for application dashboard using **AWS Cognito**, **React** and **TypeScript** to speed up developer login process by **100%**
- Automated entire developer onboarding process using **Ansible** and **Bash** scripting, including installing packages, **Docker** container configuration and automated **MongoDB** database loading, reducing onboarding time by **36x**
- Overhauled logging system of main application backend using a custom wrapper around **Winston** to speed up average log debugging time by **25%**
- Prototyped and launched new data generation service for business logic testing purposes using **TypeScript**, **DynamoDB**, **EventBridge**, **Terraform** and **Serverless Framework**

<u>eSentire</u>   <i>Software Developer Intern</i>	2022.09 - 2022.12
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- Built integral microservices including authentication systems, multilayered database access and permission/rule managers using **Python** and **AWS Lambda**
- Worked on database abstraction layers built using **SQLAlchemy** and **Python** with sharding, repartitioning and custom cache population/invalidation properties
- Increased testing productivity by **30%** by automating deployment of complete end-to-end testing pipeline to sandbox using **pytest**, **Bash**, **AWS**, **Terraform**, and **Makefile utilities** as part of the **CI/CD** pipeline
- Fixed **50%** of hanging calls in **AWS Lambda** functions by creating an asynchronous timer interrupt framework using **asyncio** to await IO-blocking processes up to a certain time limit

<u>Genellipse</u>   <i>Team Lead and AI/ML/Data Scientist</i>	2021.09 - 2022.04
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- Led team of four to successfully migrate existing POC code to working production code, per industry standards using **Python**, **AWS Lambda**, **Github Actions**, and **Terraform** by implementing **REST** microservices.

## Projects

<u>Robyn</u> Asynchronous web server written in Rust for Python   <i>Open source</i>	2022.12 - 2024.04
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- Prototyped standalone request validation schema mechanisms using smart caching techniques and OOP techniques in Python, while reducing cross-language latency and performance gaps on the Rust backend