

# RONALD ROMMEL MYLOTH

206-227-7855 | [mylothronald@gmail.com](mailto:mylothronald@gmail.com) | [linkedin.com/in/ronald-rommel](https://www.linkedin.com/in/ronald-rommel) | [GitHub](#) | [Portfolio](#)

## Education

### Northeastern University

Sep 2024 – May 2026

*Master of Science in Computer Science — GPA: 4.0*

– Coursework: Algorithms, Distributed Systems, Cloud Computing, Database Management Systems, Object-Oriented Design

### Cambridge Institute of Technology

Aug 2019 – Jun 2023

*Bachelor of Engineering in Computer Science — GPA: 8.27*

– Coursework: Data Structures and Algorithms, Computer Networks, Web Development, Artificial Intelligence, Object-Oriented Programming, Software Engineering, Operating Systems

## Experience

### Tata Consultancy Services Ltd

Jun 2023 – Jul 2024

*Software Developer*

*Karnataka, India*

- Contributed to backend microservices development using Node.js and Express for Deutsche Bank applications, supporting API endpoints and implementing business logic under senior developer guidance.
- Integrated OAuth2 and JWT authentication mechanisms into existing applications, following established security patterns and contributing to improved user access control across the platform.
- Developed responsive frontend components using React and Redux, implementing performance optimizations such as lazy loading that contributed to a 30% improvement in page load times.
- Enhanced database query performance by refactoring SQL statements and adding appropriate indexes in MySQL, achieving a 15% reduction in data retrieval latency for user-facing features.

### Xurmo Technologies Pvt Ltd

Aug 2022 – Nov 2022

*Software Developer Intern*

*Karnataka, India*

- Built secure authentication services using Azure Active Directory in Node.js and Python applications, leveraging multi-tier architecture.
- Designed scalable middleware in Node.js to validate JWTs and enforce authentication flows.
- Developed and tested RESTful APIs to support efficient internal data pipelines across distributed systems.
- Achieved over 90% unit test coverage, significantly reducing post-deployment issues.

## Projects

### Decentralized Book Exchange System | *Node.js, Express, RabbitMQ, MySQL, Docker, Artillery*

- Built scalable microservices platform with 6 independent services managing 25,000+ book records, 10,000+ user profiles, and exchange transactions with RESTful APIs and event-driven architecture.
- Containerized entire application stack using Docker Compose with MySQL and RabbitMQ, enabling seamless local development and production-ready deployment with service orchestration and health monitoring.
- Achieved 64% performance improvement by migrating from synchronous to asynchronous processing, reducing mean response time from 11.4ms to 4.1ms with 2.3× throughput increase under sustained load testing.
- Implemented RabbitMQ message queues with fanout exchanges for parallel user and book validation workflows, maintaining 99th percentile response time of 7.9ms and 100% success rate across 1,200+ concurrent requests.

### Billio: Serverless Invoice Generator | *Node.js, React, AWS (Lambda, S3, DynamoDB)*

- Engineered a fully serverless invoicing platform with AWS Lambda, API Gateway, and DynamoDB, enabling real-time invoice creation, retrieval, and updates.
- Configured secure IAM roles and fine-grained policies to manage Lambda access to DynamoDB and S3 without compromising security.
- Deployed the React frontend on Render and integrated REST APIs to achieve a seamless end-to-end user experience.
- Implemented logging via AWS CloudWatch and load tested the system to handle 100+ concurrent requests with minimal latency.

### Blood Vein Detection System (Patented) | *Python, Raspberry Pi, Machine Learning, OpenCV*

- Engineered a real-time machine learning-based prediction system to detect veins in obese patients using NIR and NoIR imaging.
- Enhanced image contrast by 40% using CLAHE; trained ML model for accurate vein location, reducing nurse retries and patient discomfort.
- Developed fault-tolerant data logging pipeline to ensure consistent operation under various lighting and user conditions.

## Publications

System and Method of Blood Vein Detection Using Near Infrared Light — Intellectual Property of India (05/05/2023).

## Technical Skills

**Programming Languages:** Java, Python, JavaScript, TypeScript, SQL

**Databases:** MySQL, PostgreSQL, MongoDB, DynamoDB

**Frameworks & Tools:** React.js, Node.js, Express, Docker, AWS (Lambda, S3, EC2), Git

**Technologies:** REST APIs, Microservices, OAuth2/JWT, Machine Learning