Tom Mulamoottil

240-367-1191 | tomm1@umbc.edu | linkedin.com/in/tom | github.com/tom116

EDUCATION

University of Maryland Baltimore County Catonsville, MD
MS Computer Science and Software Engineering *Aug. 2024 – May 2026*

Kerala Technological University Kerala, India
Bachelor of Science in Computer Science and Engineering *Aug. 2017 – May 2021*

EXPERIENCE

Software Engineer Intern - Hitachi Digital May. 2025 – Aug. 2025
Internship *Santa Clara, CA*

- Improved user engagement by **15%** through development of responsive **React** frontend interfaces.
- Enhanced application performance and scalability by building and optimizing backend services in **Java**.
- Reduced QA time by **40%** through **Python** automation during the **HubSpot migration**.
- Accelerated release cycles by **40%** through **Agile practices**, **code reviews**, and **CI/CD pipelines**.
- Achieved seamless frontend–backend integration through collaboration with **cross-functional teams**.

Software Engineer, Qburst Technologies Aug. 2021 – Aug. 2024
Client: NCR Voyix *Atlanta, GA*

- Improved backend response time by **30%** through type-safe **REST APIs** with **Nest.js**.
- Boosted database performance by **25%** using **PostgreSQL** and **Sequelize ORM** optimization.
- Achieved **85%** code coverage by resolving 50+ issues via comprehensive **unit testing**.
- Reduced unauthorized access by **40%** with secure proxy **APIs**.
- Earned client recognition for delivering a high-quality backend system built from scratch.

Client: Grocery Outlet

- Improved planners' decision-making efficiency by **20%** through development of a **Buyers Portal**.
- Increased application speed by **40%** with high-performance frontend development using **React** and **Redux**.
- Reduced QA cycle time by **30%** via automated testing with **Jest** and **Enzyme**.
- Enhanced data retrieval efficiency by **15%** through advanced **filtering capabilities**.

PROJECTS AND ACHIEVEMENTS

Winner – MorganHacks 2025 Hackathon (Sponsored by Microsoft, Goldman Sachs, Wells Fargo) Apr 2025

- Built an **AI-powered app** to convert handwritten notes and lecture audio into **Markdown** with math notation for **Obsidian** and **Joplin**.
- Integrated the **Google Gemini API** for multi-modal input, extracting textual and mathematical content.
- Implemented a **KaTeX renderer** for real-time math previews, improving accessibility and user trust.
- Developed a responsive UI with **React + Vite** for seamless interaction.
- Optimized **AI prompts** and processing to ensure deterministic, consistent outputs across formats.
- Delivered a functional MVP within 24 hours and presented to judges from leading tech firms.

Zeal (Chat Application) | *Express.js, TypeScript, Redis, PostgreSQL, Apache Kafka* 2024

- Designed and developed the backend for a Slack-like chat application using **microservices architecture**.
- Implemented real-time messaging with **WebSockets** and inter-service communication via **Apache Kafka**.
- Utilized **Redis** for caching and **PostgreSQL** for data storage to optimize performance.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, C++, Python, Go, HTML, CSS, Java, SQL
Frameworks: Node.js, React, NestJS, Express, Angular, Jest, WebSockets, Apache Kafka, TypeORM, Prisma
Databases: PostgreSQL, MongoDB, Redis, Firebase, MySQL, DynamoDB
Developer Tools: Git, JIRA, Agile, Scrum, Docker, Postman, Thunder Client, PgAdmin, Confluence, AWS
AI & Generative AI Tools: Google Gemini, OpenAI ChatGPT, Anthropic Claude, Hugging Face, MetaAI