MICHAEL ANDREW THAM

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EDUCATION

University of Waterloo, Waterloo, Ontario
Bachelor of Applied Science in Computer Engineering **Class of 2026**
- University of Waterloo President's Scholarship of Distinction recipient

TECHNICAL SKILLS

Database Management – SQL Server Management Studio (SSMS), Cloud Firestore, Microsoft Access, MongoDB, Redis
Programming Languages – Python, Java, JavaScript, TypeScript, C, C++, C# (including LINQ), SQL, React, CSS, HTML, Verilog
Cloud-Based Services – Azure Active Directory, Amazon Web Services (AWS), Google Cloud Platform (GCP)

WORK AND LEADERSHIP EXPERIENCE

Software Engineering Intern – IAM, Ford Motor Company **Jan 2024 – April 2024**
Dearborn, MI
- Spearheaded the decoupling of critical endpoints within a 100k+ file monolith, reducing latency by 60% and improving uptime
- Independently implemented fixes to existing code to pass 42Crunch conformance scans and meet company security standards
- Introduced rate limiting to reduce chances of API Abuse, Brute Force Attacks, and DDoS attacks directed toward IAM services
- Leveraged Springboot tools to parallelize cucumber acceptance tests and reduce test times from over 1 hour to 15 minutes
- Maintained perfect Jacoco branch coverage and Pitest mutation test standards through accurate and thorough unit tests

Software Development Intern, NOVX Systems **May 2023 – Aug 2023**
Richmond Hill, ON
- Implemented DICOM (Digital Images and Comms. in Medicine) support for PatientVu™ using C#, LINQ, and Amazon S3
- Developed filters for medicines, users, notes, and more through the creation and modification of SQL queries
- Created and modified various SAP Crystal Reports used for Patient Monitoring, Prescriptions, and Documentation
- Optimized features to follow **OMD certification** requirements, such as logging into the application in **under 30 seconds**

Software Engineering Intern, Ford Motors **Sept 2022 – Dec 2022**
Dearborn, MI
- Developed front-end in React and back-end with Node.js used for Fleet Management aimed towards commercial usage
- Leveraged Test Driven Development through the creation of mock adapters with Jest that are used to validate REST APIs
- Maintained continuous integration/delivery using Tekton to create pipelines, implementing Terraform and SonarQube
- Utilised FOSSA to monitor pipelines and cloud run for the deployment of the application

Software Engineering Intern, Qvella **Jan 2022 – May 2022**
Richmond Hill, ON
- Independently developed a Customer Relationship Management (CRM) web application from start to finish
- Built and tested RESTful APIs to communicate with live servers through Postman and other web services
- Utilised Amazon Web Services (AWS) to deploy applications in buckets to live users of Qvella machines and services
- Successfully automated the creation, configuration, and communication of cutting-edge Qvella machines

Part-time Software Engineering Intern (High-School), Qvella **July 2020 – July 2021**
Richmond Hill, ON
- Oversaw design, development, and updates for software used for the rapid testing of Sepsis
- Organized meetings, showcases, and installments over the course of the COVID-19 pandemic
- Reduced pollution in labs by over **80%** through the creation of paperless production lines
- Increased the production of Positive Blood Culture samples by **70%** through the automation of manufacturing

Software Engineering Intern (High-School), **NOVX Systems** **Sept 2019 – Jan 2020**
Richmond Hill, ON
- Developed software used to administer and record the results of a Workplace Impairment Test
- Youngest developer on a team of experienced Software Engineers

Robotics Club President, Thornhill Secondary School **May 2018 – June 2021**
Thornhill, ON
- Designed and fostered creative activities and challenges for members to complete at home during COVID-19
- Successfully fostered a passion for robotics and engineering within the student body despite COVID-19 limitations
- Guided students through the electronic design/implementation to participate in **VEX Robotics** competitions

PROJECTS

TeX2Speech (WIP) **August 2024 - Present**
- A passion project with the aim of converting spoken math equations into their LaTeX equivalent.
- Expected tools include Python for realtime Natural Language Processing, GPT for parsing / interpretation, and JavaScript for frontend and web integration