# MICHAEL VYTLINGAM

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*Software Engineer with 5+ years of industry experience building scalable, high-performance web applications.*
*Proven leadership in cross-functional teams, with a strong focus on data and artificial intelligence.*

## Technical Skills

**Languages**: TypeScript, JavaScript, Java, Go, Python, Rust, Dart, SQL
**Frameworks**: React, Redux, Spring Boot, Vue, Express, Jest, Flutter, Electron, Django
**Datacentric**: MongoDB, PostgreSQL, Snowflake, TensorFlow, GraphQL, Numpy, Pandas, Matplotlib
**Tools**: Git, Docker, Figma, Firebase, Jenkins, Kubernetes, Datadog, Stripe

## Experience

**Software Engineer II** — Sep. 2022 - Present
*Snowflake - Billing & Payment Platform* — *San Mateo, CA*
- Technical lead for a full-stack team of 5 engineers: defining technical direction, facilitating cross-team communication, leading design reviews, creating team charter, raising quality bar, and mentoring junior developers
- Creating **React** components in **Typescript** with focus on performance, accessibility, testability and observability
- Developing APIs in **Java Spring Boot**, **Go** and **Express**, debugging customer issues using **SQL** and **Datadog**
- Migrated statistics generation pipeline from client to Snowflake execution platform and adding batch processing, leading to tech debt reduction, **10X performance improvements** + cost reductions for wide datasets
- Shipping features reducing friction in provider tooling and purchasing flows to increase conversion on Marketplace

**Software Engineer Intern** — May 2021 - Aug. 2021
*Snowflake - Marketplace Consumer Experience* — *San Mateo, CA (Remote)*
- Shipped projects related to the launch of on-platform monetization using **React**, **TypeScript**, **Node.js**, and **Go**

**Machine Learning Engineer Intern** — Sep. 2020 – Dec. 2020
*BlackBerry – QNX Open Source and Safety Compliance Team* — *Ottawa, ON, CA (Remote)*
- Improved efficiency of **NLP-based**, open-source license detection pipeline written in **Python** using **fastText**
- **Reduced file crawling time by 70%** by introducing **multiprocessing** and **multithreading**

**Software Engineer Intern** — Jan. 2020 – Apr. 2020
*CryptoNumerics - Protect Team* — *Toronto, ON*
- Built and shipped new features for cross-platform **Electron** app used for CSV dataset privacy protection
- **Led front end application modernization**: added support for **ES6**, increased unit test coverage, **restructured Redux store** to flatten state; Implemented in stages to minimize conflicts in active codebase
- Developed internal **report generation service** in **Java** based on Pentaho, consumed in all company products

**Machine Learning Research Assistant** — Sep. 2019 – Dec. 2019
*University of Waterloo* — *Waterloo, ON*
- Trained real-time object detection model of kitchen items using **Darknet's YOLO** for pasta-cooking robot in **Python**
- **Increased** model's pan detection **accuracy by 28%** by introducing **synthetic distorted data** and improved labeling

**Software Engineer Intern** — May 2019 – Aug. 2019
*Grain Discovery* — *Toronto, ON*
- Utilized **React**, **Redux**, **DeckGL** and **Express** to build commodity trading, progressive web application
- **Decreased local build time by 23%**, adding dependency and image optimization to **Webpack**
- Practiced **agile** and **scrum methodologies** in a fast-paced pre-launch startup environment

**Software Engineer Intern** — Sep. 2018 – Dec. 2018
*ENGINEERING.com – ProjectBoard Team* — *Toronto, ON*
- Worked extensively in **Vue**, **Vuex**, **Go** and **MySQL** on project collaboration platform with **2M+ monthly users**
- Built dashboard to visualize user analytics in **Vue**, created RESTful endpoints using **Go** and data retrieval in **SQL**

## Education

**University of Waterloo**
*BASc in Mechanical Engineering, Computing Option* — *Waterloo, ON*
- Programming for Performance, Data Structures & Algorithms, Co-operative and Adaptive Algorithms, Computational Intelligence, Pattern Recognition, Coursera - Machine Learning by Andrew Ng

## Contract Work

**Pancho's Bakery Store Manager** | *Flutter (Dart), Firebase, Google Cloud Functions* — Jun. 2020 – Aug. 2022
- Paid **iOS/Android app** commissioned by Toronto bakery to manage employees, sales, inventory at multiple stores