Michael DeMarco

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EDUCATION

The University of British Columbia, B.Sc. Honors Computer Science (Co-op), minor in Data Science
Vancouver, British Columbia—Sep 2019 to Apr 2024 | Site

- GPA: 93% (4.33/4.33)
- Coursework: Computer Hardware and Operating Systems, Intermediate Algorithm Design and Analysis, Internet Computing
- Awards: Undergraduate Teaching Assistant Award (x2), Trek Excellence Award (Top 5%) (x2), Presidential Scholar

TECHINCAL EXPERIENCE

Notion, Software Engineer Intern
San Francisco, California—May 2024 to Aug 2024 | Site

- Contributing to Notion's performance on the Web Infrastructure team.

The Canadian Space Agency, Software Engineer Intern
Saint-Hubert, Québec—May 2023 to Aug 2023 | Site

- Implemented a **genetic algorithm** for selecting waypoints based on scientific value, distance, and Lunar rover capability.
- Leveraged caching, parallelization, and data structures to reduce computation time **by 90%** for A-to-B shortest path subroutine.
- Developed multi-directional search algorithm using random trees to navigate static and dynamic obstacles between chosen waypoints.

Tesla, Software Engineer Intern
Palo Alto, California—Sep 2022 to Dec 2022 | Site

- Collaborated on internal mapping tool to assess and optimize placement of Supercharger stations around the globe.
- Led development of feature to efficiently visualize **thousands of site opportunities** with existing sites using **Flask** and **React.**
- Leveraged **React** best practices to improve code re-use in map UI and its related filters and tools, enabling future extensibility.

Amazon, Software Engineer Intern
Toronto, Ontario—May 2022 to Aug 2022 | Site

- Enhanced supply chain vendor onboarding for complex, six-step multipage form with tailored product tours in **React.**
- Introduced proxy layer for API calls to enable form experimentation during tours with minimal impact to existing codebase.
- Eliminated need for weekly synchronous vendor on-boarding sessions and reduced FAQ-like tickets given to support team **by 90%.**

Samsung, Software Engineer Intern
Vancouver, British Columbia—Jan 2021 to Aug 2021 | Site

- Migrated legacy web app written in **Drupal** to service-oriented architecture with **React** and **Node,** complete with unit tests.
- Created **ETL** pipeline and **Node** service to summarize QR code data from **800,000+ phones** for analytics dashboard.
- Refactored **MongoDB** aggregation queries and refined indexes to improve endpoint response time by **up to 50%.**

PROJECTS

CheetCode, proof-of-concept to allow inteviewees to cheat technical interviews via large language model (LLM) responses
Waterloo, Ontario—Sep 2022 to present | Project | GitHub

- Built proof-of-concept app to solve technical problems via LLM responses, undetected, using **JavaScript, Python,** and GPT-4.
- Earned **finalist distinction at Hack The North 2023** out of field of **250 project submissions.**

Visual Studio Code Puzzles, simplify technical interview problem practice
Vancouver, British Columbia—Jun 2020 to present | Project | GitHub

- Developed Visual Studio Code extension to import technical interview problems into your IDE using **TypeScript.**
- Won Microsoft's "Best Use of External API" award and has **260+ installs.**

VOLUNTEERING

Major League Hacking, Workshop Lead
Remote, Remote—Sep 2020 to present | Site

- Led **5 workshops** at hackathons country-wide for **400+ participants** on topics such as **React** and **machine learning.**
- Developed engaging delivery style that actively involves participants throughout workshop; recordings have garnered **500+ views.**

Cloud Native Computing Foundation (CNCF), Kubernetes Release Shadow
Remote, Remote—May 2023 to Aug 2023 | Site

- Curated and edited release notes from relevant pull requests for the v1.28 release of Kubernetes.
- Coordinated with special interest groups (SIGs) to ensure release note accuracy and determined major themes.

TECHNICAL SKILLS & INTERESTS

Languages	Python, TypeScript, JavaScript, Java, SQL, NoSQL, GraphQL, C, C++, HTML, CSS, Dart, TeX, Bash, Protobuf
Frameworks	React, Node, Flask, Django, pandas, NumPy, scikit-learn, pytest, Spring, JUnit, Tailwind
Other	Git, Docker, Kubernetes, Cloud Computing, AWS, GCP, REST, gRPC
Interests	Linguistics, Physics, Economics, Soccer, Hockey, Music, Piano, Saxophone