

# Ethan Cratchley

778-837-0285 | [ethan@ethan-cratchley.com](mailto:ethan@ethan-cratchley.com) | [linkedin.com/in/ethan-cratchley](https://www.linkedin.com/in/ethan-cratchley) | [github.com/EthanCratchley](https://github.com/EthanCratchley) | [ethan-cratchley.com](https://ethan-cratchley.com)

## Education

### Simon Fraser University (SFU)

Sep 2022 – Apr 2027

*Bachelor of Computer Science and Business Administration (Joint Major) - Concentration in Artificial Intelligence*

- **Coursework:** Data Structures & Algorithms, Software Engineering, Operating Systems, Systems Programming, Data Communications and Networking, Calculus, Linear Algebra, Discrete Mathematics, Statistics, Product Management

### National University of Singapore (NUS)

Aug 2025 – Dec 2025

*Exchange Program*

## Experience

### Software Engineer

Dec 2024 – Present

*Autonommi*

*Hybrid*

- Developed and fine-tuned large language models (LLMs) to optimize understanding and generate high-quality text outputs.
- Deployed scalable AI APIs enabling real-time inference and integration across multiple product environments, ensuring high availability and low latency for user workloads.
- Improved model inference speed by +50% and reduced cloud compute and data transfer (ingress/egress) costs by ~25% through caching, batching, and optimized data pipelines.

### Member of Technical Staff Intern

Apr 2024 – Aug 2024

*Wilson Beck Insurance*

*Vancouver, BC*

- Implemented AI-driven automation workflows that enhanced internal operational efficiency and boosted LLM performance by ~20–30%.
- Researched and streamlined internal procedures, increasing employee efficiency by ~15%.
- Developed and deployed Python based automation tools to optimize company operations and workflows.

### Lead Software Engineer

Oct 2024 – May 2025

*SFU OS Development Club*

*Vancouver, BC*

- Managed a 20+ member cross-functional team, overseeing hiring, interviews, and end-to-end project planning.
- Shipped FinancialFastFeed.com MVP, attracting 100+ unique users in the first month and improving access to financial news.
- Directed product development, sprint cycles, CI/CD pipelines, and team workflows, ensuring high quality software.

## Projects

### Kaggle Competitions & Writeups | Python, PyTorch, Scikit-learn, Feature Engineering, Data Analysis

Feb 2025 - Present

- Authored high-quality Kaggle notebooks and writeups with 20K+ views, 5K+ downloads, and 50+ upvotes, demonstrating strong community engagement and reproducible research practices.
- Implemented and benchmarked a range of models such as CNNs, Transformers, XGBoost, SVMs, Linear Regression, and more using Python, PyTorch, TensorFlow, and Scikit-learn to solve real-world datasets and competition problems.
- Conducted comprehensive data analysis, built end-to-end ML pipelines, and produced clear technical breakdowns.

### Custorix | Python, Flask, Gemma 3n, YOLOv11, Raspberry Pi, Ollama

Jun 2025 - Aug 2025

- Built a private, offline first, multimodal AI security system using Gemma 3n, YOLOv11, and Raspberry Pi to deliver real-time video/audio analysis and natural language alerts without cloud dependencies.
- Developed an AI server with Flask for distributed intelligence and a native iOS app (SwiftUI) + React dashboard.
- Optimized model deployment on resource-constrained Raspberry Pi hardware, enabling 30fps local inference.

### Financial Fast Feed | Python, JavaScript, CSS, MongoDB, Git, React, Render

Dec 2023 – Mar 2025

- Fetch financial news RSS feeds from 25+ sources with Python and summarize them with Open AI API.
- Store complete data and summarization of RSS feeds to MongoDB at a rate of up to 272 times per day automatically.
- Built full-stack web application using React, Next.js, and Render for seamless deployment.

## Skills, Honors, Certifications, and Organizations

**Languages:** Python, JavaScript, TypeScript, Java, C, C++, SQL, HTML, CSS, MATLAB, Bash, LaTeX

**Frameworks & Libraries:** PyTorch, TensorFlow, ChromaDB, Pinecone, React, Next, Node, Express, Flask, Scikit-learn

**Tools:** Git, AWS, Google Cloud, MongoDB, Redis, Docker, Kubernetes, Kafka, Figma, Tableau, PowerBI

**Skills:** System Design, REST APIs, Data Visualization, MLOps, Testing & Debugging (Unit, Integration), CI/CD

**Competitions & Honors:** Memorial International Study Abroad Award, WinterHacks Best Pitch, CrackedDevs Best Educational Project, BMO Marathon Completion, Gruesome Twosome Half Marathon 7<sup>th</sup> Place, CFAC Portfolio Management, PicoCTF