

Tanay Patel

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Education

McMaster University

Bachelors of Electrical Engineering | GPA: 3.95 / 4.00

Hamilton, ON, Canada

Sep 2019 - Apr 2023

Skills

- **Languages:** Python, Java, Typescript, Javascript, C, C++, HTML, CSS, SQL
- **Technologies:** AWS, Spark, React, Node, Flask, MongoDB, OpenCV, Git

Experience

Amazon, Software Development Engineer

Vancouver, BC

Financial Insights, Accounting, Subledger & Traceability

July 2023 - Current

- Independently reduced costs by ~ \$1.1 million per year by optimizing infrastructure, big data processes and compute logic.
- Streamlined auditing and accounting processes by reducing General Ledger to transactional-level look-ups times from 181 minutes to < 10 seconds per GL line by designing and then leading a team of 3 engineers to implement a system that maps hundreds of millions of source transactions.
- Addressed and resolved a CFO-level escalation by automating Amazon's critical monthly financial control and reduced processing time by 92% (38 hours to 3 hours).
- Developed a real-time transactional data validation system (SPC) for Amazon's new internal accounting pipeline, supporting peak traffic of 250 million transactions per hour (7.35 billion dollar per day) across all global regions, by solely designing and then implementing the system using AWS CDK, TypeScript, Java, and distributed computing technologies (Spark & Glue).
- Increased data accuracy and completeness of Amazon's new accounting pipeline from 82.3% to 100% by resolving critical parity errors identified by SPC and root-causing origins of financial variances throughout the pipeline.
- Reduced operations ticket resolution time by 30% by updating SOPs and writing Python scripts to automate procedures.

Amazon, Software Engineer Intern

Vancouver, BC

Unified Subledger Team

May 2022 - Aug 2022

- Developed a secure internal web app to visualize and interact with data-logging from ~80% of Amazon's worldwide online financial transactions, to reduce time taken to resolve customer's failed/incomplete data logging tickets by 93%.
- Created an extendable backend using Java, JavaScript, and AWS technologies (Lambda, APIGateway, Route53, and VPC).
- Developed frontend using React, JavaScript, HTML, CSS and hosted static website content on S3 distributed by CloudFront.
- Onboarded the Debugging and Financial dashboards as well as other intern projects to the web app; reducing time taken to resolve recurring tickets by up to 80%.

MoviWear, Software Engineer Intern

Toronto, ON

Medical Sensors & Machine Learning Team

May 2021 - Aug 2021

- Developed from scratch a smart-watch application to monitor the BP, oxygen levels, and heart-rate of 250+ clients in real-time using Java, C, and Python.
- Improved ML training data quality by optimizing Python code to increase medical sensors' sampling rates by 320%.
- Collaborated in an agile software development process to develop front-end elements using HTML, CSS, and JavaScript.
- Completed end-to-end delivery of my project from requirements, to design, to implementation, testing and documentation.

Projects

Aurora WebnData - Python | JavaScript | Flask | MongoDB

May 2021 - Sep 2021

Data Gathering, Database, Logistics Optimization

- Developed a website, and in-game income simulator for an online community of 550+ players using Flask, HTML, CSS, and JavaScript.
- Increased membership by 40% over 30 days and used Google-Analytics to better pair mentors and mentees.
- Automated logging and sorting 168,405+ data points daily to MongoDB, using APIs, HTTP Requests, and Web scraping.
- Lead and mentored an international team of beginner coders to develop scripts using Python.

FaceLog - Python | OpenCV

Jan 2021 - Feb 2021

Facial Recognition based Security

- Successfully auto logged off family business computers 50+ times against unauthorized user attempts by developing a Python application that restricts computer access using facial recognition, via OpenCV and NumPy.