Parth Patel

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EDUCATION

San Jose State University – *Master's in Software Engineering* | *GPA: 3.7*
University of Toronto – *Bachelor of Science in Mathematics and Statistics*
Technical skills: *Python, JavaScript TypeScript, React, C/C++, Java, Node.js, Flask, SQL, AWS, Azure, GCP, Docker, Oracle, MySQL*

WORK EXPERIENCE

Deloitte, *Software Engineer*   July 2022 – Nov 2024
Client: Public Health Agency of Canada
Tech stack: Python, TypeScript, React, Flask, Azure Functions, Data Factory, Data Lake Storage, SQL, Git

- Won the **Deloitte Silver Dot Award** for leading a FHIR-compliant cloud-based solution for the Vaccine Surveillance team.
- Built a **TypeScript-Python-Flask** web-application delivering real-time vaccine insights data for 3 provincial health teams.
- Improved system performance by **30%** by replacing legacy systems with Azure Functions and Data Factory in **Python**.
- Created an **Azure ETL pipeline** to detect and redact PII in real-time, ensuring HIPAA compliance.

Client: Employment and Social Development Canada
Tech stack: C++, Java, GitHub Actions, AWS Elastic Beanstalk, AWS Lambda, Git

- Led the delivery of an **AI chatbot** that boosted internal productivity by replacing static guides with visual walkthroughs.
- Reduced ticket handling time by **2+ hours** and increased accuracy by developing a form automation tool in **C++**
- Streamlined feature deployment to ESDC's **Java platform** using GitHub Actions for CI/CD and **AWS** Elastic Beanstalk.

RESEARCH & PROJECTS

Research at San Jose State University – AI-Powered Code Feedback System   May 2025 – Present
Tech stack: Python, Docker, MySQL, SQL, GitHub, CodeBERT

- Developed a **Python** AI model by analyzing **24 semesters** of coding assignments to generate code feedback for students.
- Designed and built **Docker** containers for the AI model, training pipeline, and inference API.
- Deployed AI feedback system via **GitHub Actions**, delivering instant feedback to students across **8 classes** at 2 universities.
- Optimized AI model training and inference by **50%** by using abstract syntax tree libraries and **CodeBERT** model.

QuizMaster – Full-stack AI Quiz App   July 2025
Tech stack: React, TypeScript, Python, AWS Lambda, API Gateway, S3, DynamoDB, Gemini, Firebase, Vitest

- Enabled users to generate, save, and share personalized quizzes – currently serving **25 active users.**
- Built QuizMaster's frontend application using **React** and backend with AWS serverless, integrated with Gemini's API.
- Automated CI/CD pipelines with **AWS** CodePipeline and CodeDeploy for seamless deployment to EC2.
- Implemented an authentication/authorization system using **Google Firebase,** allowing users to sign in using Gmail.
- Developed unit and integration tests using Vitest to ensure API reliability and robust error handling.

TenMunches – AI-Driven SF Food Discovery Platform   June 2025
Tech stack: React, TypeScript, Python, Supabase, PostgreSQL, SQL

- Enable users to explore **AI-curated** food & drink recommendations in San Francisco across **20 categories.**
- Curated SF's hidden food gems by scraping insights from **10,000+ Google reviews & 200+ articles**
- Surfaced top SF businesses through sentiment analysis from real testimonials using custom **Python NLP pipeline**.

CERTIFICATIONS

- GCP **Professional** Data Engineer Certification (**Stack**: Google Kubernetes Engine, App Engine, BigQuery, GCS, Vertex AI)
- Azure Data Engineer Associate Certification (**Stack**: Azure Functions, Azure VMs, Azure SQL, Azure Synapse Analytics)

OTHER SKILLS

- Ranked #1 in Operating Systems course at SJSU.
- Proficient in **containerization** concepts and cloud architecture via certifications.
- Experienced with SQL and NoSQL databases (**Oracle, MySQL, BigQuery, and DynamoDB**).