Tszfai Choy

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Experience

Roblox, Software Engineering Internship – San Mateo, CA   May 2025 – August 2025

- Architected and delivered a real-time budgeting and visualization system for forecasting infrastructure costs across 100M+ daily users, directly influencing hardware planning
- Built automated budget and quota alerting systems, proactively preventing unplanned infrastructure spending and supporting cost conscious decision making
- Engineered distributed gRPC microservices in Go with PostgreSQL, processing hundreds of thousands of infrastructure records daily for scalable, reliable, low-latency real-time cost tracking
- Integrated Airflow DAGs and PySpark pipelines on AWS with Grafana dashboards to analyze infrastructure spend in real time

Johnson & Johnson, Software Engineering Co-op – Raritan, NJ   June 2024 – December 2024

- Migrated a legacy system managing 300k+ assets to a React, Node.js, and PostgreSQL stack, improving query performance by 100x
- Engineered an executive management portal with Lit and Billboard.js for interactive data visualization used by senior stakeholders
- Automated CI/CD pipelines in Jenkins with Docker-based deployment, eliminating manual release steps and accelerating delivery

Rochester Institute of Technology, Course Assistant – Rochester, NY   September 2023 – May 2024

- Mentored 28 students in Java and Python, contributing to a 100% course pass rate

Personal Projects

Tetris Opener Bot   github.com/TChoy04/tetris-opener-bot

- Implemented an image recognition algorithm to identify Tetris pieces, optimizing placement strategies via automated analysis
- Engineered an algorithm that efficiently determines optimal placement for Tetris pieces for the first three bags handling 128 billion possible configurations and doubling piece efficiency

Cryptocurrency Tracker   tszfai.dev/crypton

- Developed a real-time cryptocurrency tracker using React and API integration, allowing users to view real-time price data and market cap rankings

Technical Skills

Languages: C++, Python, Go, Java, JavaScript, TypeScript, SQL
Frameworks/Libraries: React, gRPC, PySpark, Node.js, SparkSQL
Cloud/DevOps: AWS, Docker, Terraform, Jenkins, Airflow, Grafana
Databases: DynamoDB, PostgreSQL, MongoDB

Education

Rochester Institute of Technology   Expected May 2026
Bachelor of Science in Software Engineering   GPA: 3.5