

# Edward Chang

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## TECHNICAL SKILLS

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**Programming Languages:** Proficient in Python, JavaScript/TypeScript, React; knowledgeable in C/C++, Java  
**Developer Tools:** Git, Docker, Jenkins, Amazon Web Services (AWS), Google Cloud Platform (GCP)

## PROFESSIONAL EXPERIENCE

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- Software Engineer** | *Python, TypeScript, PostgreSQL, FastAPI, React, Vue.js* Feb. 2024 – Present  
*Commure Mountain View, CA*
- Redesigned complex revenue cycle management (RCM) data pipeline and algorithms to achieve >99.9% success rate while handling 20x the load through a change of architecture and improved algorithms resulting in more accurate reporting and increased revenue for both the company and clients.
  - Engineered a robust workflow for processing autoforwarded claims in RCM, fully automating the process and eliminating the need for manual intervention. Increased accurate identification from 4.2% to 19.3% of total claims (a 459% improvement in identification accuracy). Enhanced claim tracking and remittance allocation, reducing confusion and enabling faster follow-ups on unpaid autoforwarded claims to ensure resolution.
  - Replaced a legacy rule engine for actions with a parameterized and JSON-driven commutative rule engine, achieving 100% integration across all workflows and simplifying rule logic for consistent outcomes. It enhanced self-service rule creation, reducing the toil of developing new conditions by 90%, while surfacing previously undetected issues and supporting scalable enhancements for future growth.
  - Led org-wide CI pipeline improvements through net-new code coverage, restricted off-hour deployments, automated stale PR closures, validated migrations, and managed dependency caching for faster run-times. These resulted in reduced production errors, enhanced code quality, optimized build times, and ensured valid, conflict-free database migrations. Contributed new features to open source libraries.
- Junior Software Developer** | *TypeScript, Python, Docker, Jenkins, SQL, Jest, K6* Jan. 2023 – May 2023  
*Pelmorex (The Weather Network) Mississauga, ON*
- Improved TypeScript weather description generator by 83% for hyper-accurate weather descriptions with 2M+ daily API requests.
  - Reduced telemetry storage for weather description generator by 93% via aggregation and field reduction, resulting in decreased costs and improved analytics.
  - Used knowledge of SDLC to elicit requirements from clients and implement a Jenkins pipeline in Python to convert weather templates from Google Sheets to sqlite3 files on AWS S3 resulting in improved client productivity.
- Backend Developer Intern** | *C++, Java, Spring, Docker, Jenkins, MongoDB, JUnit* Jan. 2022 – Aug. 2022  
*Square Enix (Acquired by Embracer Group in 2022) Montréal, QC*
- Developed a Java-based API tool to track player progress across multiple platforms, improving data analytics for enhanced insights into game-player behavior.
  - Implemented a C++ client-side rate limiting tool to improve game server stability during high player traffic, mitigating game-wide crashes caused by bugs/spamming, upholding the game company's interests.
- Software Developer Intern** | *Java, JavaScript, HTML/CSS, SQL* May 2021 – Dec. 2021  
*Traction on Demand (Acquired by Salesforce in 2022) Burnaby, BC*
- Enhanced client experience by implementing custom workflows and API endpoints in Salesforce, reducing clicks required to perform actions.

## SOLO PROJECTS

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- NFT Portfolio** | *TypeScript, Golang, NextJS, Express, Redis, MongoDB, DigitalOcean* Sep. 2022 – Feb. 2023
- Launched a web service from market demand, attracting 11K+ unique users and 50K+ unique sessions within a month.
  - Increase of 714% in average user engagement time, from 16 secs to 1 min 54 secs, by optimizing server performance through techniques such as reducing mean-time-to-failure, implementing data caching, request queuing, and data scraping, resulting in improved user experience and increased insights.

## EDUCATION

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- Georgia Institute of Technology** | *M.Sc. Computer Science (Remote, Part-Time)* Aug. 2023 – Present  
**University of Western Ontario** | *B.Eng. Software Engineering* Graduated 2023