

# ALEX PENG

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## EXPERIENCE

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### Touchbistro

June 2024 - Sept 2025

Software Engineer

Toronto, Ontario

- Integrated Datadog monitoring and alerting for critical backend services, instrumenting application performance (latency, throughput), database query performance, error rates, and business metrics (API call volumes, transaction success rates).
- Established real-time dashboards and automated alerts enabling the team to detect and respond to production issues proactively rather than reactively, significantly improving service reliability.
- Designed and developed a full-stack internal guest management platform using **Node.js** and **React**, streamlining staff workflows and improving day-to-day operational efficiency.
- Owned end-to-end technical delivery of merchant onboarding for DoorDash Drive and Marketplace integrations, enabling seamless activation for new merchants across a 10K+ merchant customer base and driving increased platform adoption across both channels.

### Jobber

Sep 2021 - April 2024

Software Engineer

Toronto, Ontario

- Collaborated across multiple teams to migrate the entire mobile codebase from **Ember.js** to **React Native** within one year, delivering the project on schedule while maintaining full feature parity.
- Designed and integrated Twilio's Programmable Voice API into the web application, enabling real-time calling between users and their customers and employees; a high-visibility feature that meaningfully expanded the platform's communication capabilities.
- Architected a real-time online user presence tracking system using **Redis** pub/sub and **Ruby on Rails**, enabling low-latency state synchronization critical to the in-app calling experience.
- Led the design and delivery of an online booking feature enabling customers to seamlessly schedule assessments, requests, and jobs, contributing directly to customer activation and retention metrics.
- Built a scalable bulk operations system within internal admin tooling, enabling high-volume actions (tagging, exporting, and deletion of client records) and reducing operational toil for internal teams.
- Mentored engineers on **GraphQL** fundamentals and best practices, establishing team-wide standards for schema design, authentication, and testing. Improvements in code quality and standardization reduced review feedback cycles and accelerated feature delivery across the 5 person engineering team.

### Unisystech Consulting

Mar 2021 - Sep 2021

Environment Support, Java Developer (Contract)

Toronto, Ontario

- Developed a CI/CD automation tool using **Groovy** that reduced manual deployment overhead and standardized release workflows across environments, cutting deployment errors and improving team velocity.
- Built automated integration test suites for QA and staging environments using **Mocha**, improving deployment confidence and reducing regression risk.

### Municipal Property Assessment Corporation

Nov 2018 - Mar 2021

Software Developer

Pickering, Ontario

- Engineered a replacement for proprietary PDF generation software (PrinceXML) using **Python** and Headless Chrome, eliminating a \$600,000/year licensing cost while improving rendering fidelity and long-term maintainability.
- Developed an **Angular** application for tracking and analyzing property assessment data, ensuring full compliance with AODA accessibility standards and WCAG 2.0 guidelines.
- Integrated Spring Batch into a **Spring Boot** application to manage batch processing of residential property workflows, improving throughput and reducing reliance on manual interventions.
- Designed and executed **PostgreSQL** database migration scripts to eliminate legacy anti-patterns, clean up stale data, and optimize query performance at scale.

### MainStream Media Unplugged

Aug 2018 - Oct 2018

Android Engineer (Contract)

Toronto, Ontario

- Designed and built a media streaming **Android** TV application using the Leanback library, delivering a polished lean-back viewing experience for end users.
- Streamlined the Google Play Store deployment pipeline by implementing automated testing and CI practices, reducing deployment errors and accelerating release cadence.

## EDUCATION

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Toronto Metropolitan University - Bachelor of Science (Honours), Computer Science

Sep 2014 - Apr 2018

## TECHNICAL SKILLS

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- **Languages:** Java, Python, Ruby, JavaScript/TypeScript, SQL
- **Frameworks:** React, React Native, Ruby on Rails, Node.js, Spring Boot, Angular
- **Databases:** PostgreSQL, Redis
- **Tools & Platforms:** Datadog, GraphQL, Jenkins, Docker, Git
- **Core Competencies:** System Design, Distributed Systems, API Architecture, Mentorship

## PROJECTS

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Chinese Learning Platform [ajpeng.github.io/chinese-flashcards](https://ajpeng.github.io/chinese-flashcards)

- Built an end-to-end Mandarin learning platform featuring an interactive article reader, spaced-repetition flashcards (SM-2 algorithm), and AI-powered speech accuracy scoring
- Engineered a two-phase article ingestion pipeline: dictionary-based segmentation returns instantly while an async background job enriches missing definitions via LLM, preventing HTTP blocking
- Integrated Azure TTS with word-level timing to synchronize audio playback with real-time word highlights
- Implemented Patreon OAuth 2.0 with JWT refresh token rotation and per-user settings stored in PostgreSQL (RDS)