# Edward Ng

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### Experience

## Lead Software Developer

Feb 2025 – Present

Bank of Montreal

Toronto, ON

- Directed a team of 5 on shore and offshore developers in training machine learning models for document extraction platform, increasing team productivity and delivering 2-6 models per week with up to 97% accuracy
- Refined technical requirements with business teams to implement information extraction, document classification, and signature detection in the product—contributing to the design of the end-to-end pipeline from file ingestion to API response
- Led the team in vulnerability management by tracking, planning, and patching cloud and application security vulnerabilities across both non-production and production environments—reducing open issues by 61%
- Managed production releases by coordinating with PMs and QAs to schedule release windows and ensuring thorough testing in lower environments before deploying ECR, ECS, and Lambda stacks, and uploading ML models to S3—monitored stability through AWS CloudWatch and performed regression testing
- Migrated legacy cloud projects to a multi-account architecture and on-prem model training process to SageOps, enabling greater scalability and long-term operational security

## AI Engineer (Contract)

June 2024 – Jan 2025

Scale AI

San Francisco, CA (Remote)

- Engineered complex prompts covering a variety of programming challenges across Python, SQL, and Java to train and evaluate LLM responses using reinforcement learning from human feedback, applying techniques such as zero-shot and single-shot prompting
- Reviewed user-submitted tasks to assess the effectiveness of prompts and responses, ensuring high-quality training data for continuous LLM improvement and achieving stability for production deployment

## Software Developer

 $Sept\ 2022-Aug\ 2023$ 

Bank of Montreal

Toronto, ON

- Developed a document classification and dynamic information extraction system utilizing AWS Textract, LSTM, BERT and FastText word-embedding models, boosting business productivity while reducing costs
- Worked end-to-end in an agile environment by preprocessing data, training and testing the model, and creating postprocessing functions to enhance the model results which led to above 96% accuracy on information extraction
- $\bullet$  Developed project code within AWS Lambda and created acceptance tests for these projects with a code coverage above 95%
- Performed continuous integration by improving extraction model's accuracy up to 23% using new production data and sending monthly performance reports to project managers by monitoring API usage on EC2

#### **Projects**

SpeakEase AI | TypeScript, React Native, Node, Express, Expo Go

- Led a cross-functional team of student entrepreneurs in mobile application development, engineering a chatbot that enables users to practice conversational skills with pronunciation and sentence structure assessment in 15 languages
- Developed and optimized RESTful API using Node, Express, and Azure Speech SDK by restructuring data pipelines, reducing process runtime from 5 minutes to less than a minute
- Designed front-end interface using React Native and conducted comprehensive A/B testing, refining UI/UX elements based on user feedback
- Bundled app with Expo Go and released to Apple Store and Google Play Store, scaling to 500+ users globally

#### Technical Skills

Languages: Python, Java, JavaScript, TypeScript, SQL, HTML, CSS

Frameworks: React Native, NodeJS, Express, MongoDB, SQLite, REST API, MCP

Libraries: PyTorch, Tensorflow, Pandas, OpenCV, NumPy, Matplotlib

Tools/Services: AWS (Lambda, S3, SQS, ECS, CloudWatch), Docker, GitHub (Actions, Copilot), Linux, IIS

#### Education

Queen's University Sept. 2020 – June 2024