

# Edward Ng

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## Education

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### Queen's University

Bachelor of Science, Computer Science | Graduated with Distinction | 3.81 GPA

Sept. 2020 – June 2024

Kingston, ON

## Experience

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### AI Engineer (Contract)

Scale AI

June 2024 – Present

San Francisco, CA (Remote)

- Engineered complex prompts covering a variety of programming challenges across several languages to train and evaluate the LLM's responses for coding problems in Python, SQL, and Java
- Fine-tuned LLM for coding tasks by prompt engineering and evaluating model responses using reinforcement learning from human feedback, successfully training the LLM to reach a stable state for production
- Review user submitted tasks to assess the effectiveness of prompts and responses to ensure high level of training data for continuous improvement for the model, while also maintaining an average 4/5 score on my reviewed tasks

### Software Developer

Bank of Montreal

May 2022 – Aug 2023

Toronto, ON

- Developed a document classification and dynamic information extraction system utilizing AWS Textract, LSTM and BERT 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
- 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

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

- Led a small 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

### Neuro Evolution Organism Simulation | Python, Matplotlib

- Built a simulator to observe an evolving population of artificial organisms (through continuously updating the topology of weights and neurons) and visualizing using Matplotlib
- Implemented optimal configurations of mutation, crossover, and selection, which allowed the simulation to trend in an average improvement of around 86% in the organisms' fitness through 7 generations

### I Spy Game | Python, OpenCV, PyTorch

- Developed game of I Spy where the system identifies and guesses an object of a specific colour using OpenCV and a CNN model
- Used OpenCV to detect colours of objects and a CNN model trained on the Microsoft COCO dataset to recognize objects, resulting in classifying objects of specific color with 82% accuracy

## Technical Skills

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

**Frameworks:** React, NodeJS, Express, MongoDB, REST API

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

**Developer Tools:** Linux, AWS Lambda, S3, EC2, GitHub, Docker, Jira