YIFEI YIN

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Software Engineer with rigorous technical skills and excellent collaborative skills looking for exciting opportunities

EDUCATION

Queen's University **Class of 2020**

- Bachelor of Computer Science (Honors) – Artificial Intelligence Specialization
- GPA 3.95, Dean's Honors List with distinction

WORK EXPERIENCE

Sophos *[Software Engineer]* **February 2022 – Present**

- Architecting, and building BA tools for PB-level datalake to optimize spending ($6M reduction target)
- Optimized Data LT (Load & Transform) that reduced runtime from hours to minutes, providing real time insights

Snapcommerce *[Software Engineer]* **April 2021 – February 2022**

- Maintaining a **high-performance search engine** in Python that handles 1000+ QPS with 99.9+% uptime
- Improved data ingestion on **Airflow** and **AWS**, shortening ingestion from two months to 4 days without cost increase
- Integrated multiple external **APIs** with existing backend/data services being used by millions of users per month
- Developed risk-evaluation **machine learning** engine which has helped to save hundreds of malicious price attacks
- Modeled user behaviours with **ensembled Neural Networks** that predict user transactional actions at 98% accuracy

WaiveTheWait *[Lead Software Engineer]* **April 2020 – March 2021**

- Served ~10k system transactions daily with asynchronous thread design with **Django** + **NGINX** on **Docker**
- Researched Machine Learning model for wait time estimation in PyTorch, 9% MAPE (State-Of-The-Art)
- Built **REST** API interfaces for integration with top medical software (OSCAR, AccuroEMR) with **OOP** design
- Compete and won $21,250 funding from the **QICSI pitch competition**; accepted to the famous incubator - **NEXT36**

Speech Perception and Production Lab, **Queen's University** *[Research Assistant]* **April 2019 – April 2020**

- Developed, deployed and optimized C++ program for real-time signal processing that took advantage of x64 memory
- Performed temporal analysis with **NumPy** (**Python**), published in the **Journal of the Acoustical Society of America**
- Collaborated with Epic Games and used Apple's ARKit to develop a facial tracking system at 60Hz

Research/Projects

Big-Data Analytics and Laboratory, Queen's University *[NLP Researcher]* **March 2019 – July 2020**

- Designed neural networks with state-of-the-art prediction accuracy at 91.7% (State-Of-The-Art)
- Published at **PICom2020 International IEEE Conference** and received the **Best Student Paper Award**
- Innovated BERT (**TensorFlow**) for legal outcome prediction on ECHR unstructured corpus, F1=86.7 (State-Of-The-Art)
- Implemented efficient data storage, which allowed model fine-tuning training process to be 40 times faster

Reinforcement Learning Course *[Course Project]* **February 2020 – May 2020**

- Developed a Deep Convolutional Network (**CNN**) to finish the Super Mario Game in **PyTorch**
- Optimized RAM efficiency for Double Deep Q-Learning to increase training speed by 30 times

Neural Networks and Cognitive Models Course *[Course Project]* **February 2019 – May 2019**

- Implemented **RNN** and **CNN** with Attention in TensorFlow for Hanzi recognition with 92.5% accuracy
- Converted binary stoke information from a handwritten collector to python list representations
- Optimized parameter size to achieve more than 40% speedup in model training with minimal performance penalty

Queen's To Go *[Project]* **April 2018 – December 2019**

- Created and published Android app which was **Google Play Store Top 5 Trending Tools, Top 50 Movers & Shakers**
- Marketed and maintained/updated the application for 2 years using **Android Studio** and **Java**
- Designed the application backend for storage and processing and optimized for a wide range of android devices