Mark Chen

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SKILLS

Languages	Python, C++, SQL, C, TypeScript, Java, Kotlin, Scheme, R
Tools	Sklearn, TensorFlow, PyTorch, MLFlow, CUDA, OpenCV, AWS, Databricks, Anaconda, ETL, Git, Docker

EDUCATION

Bachelor of Computer Science / University of Waterloo　　　　　　　　　　　**Sept 2019 — Apr 2024**
- Artificial Intelligence Specialization
- Scholarships: President's Scholarship of Distinction, Faculty of Mathematics Scholarship
- Relevant Courses: Algorithms, Data Structures, OOP, Operating Systems, Numerical Computation, Artificial Intelligence

WORK EXPERIENCE

Data Scientist / GoldSpot Discoveries Inc　　　　　　　　　　　**Jan 2022 — Apr 2022**
Python, PyTorch, SkLearn, AWS, EC2, S3, Lambda, Textract, OpenCV, MLFlow, Streamlit　　　　*Toronto, ON*
- Created a multi-class object detector with distributed training on 8 GPUs using the YOLOv5 framework to identify handwritten numerical text on rock surfaces and wooden textures with 85% precision and 79% recall
- Deployed an automated service that starts and ends a virtual EC2 cloud cluster, for sorting and predicting depths for thousands of kilometers of rock and drill hole images
- Spearheaded the creation of a spectrometer based on valuable elements by training SimCLR models to cluster images of rock and mineral textures using t-SNE after applying dimensionality reduction techniques such as PCA and ICA

Data Scientist / eCompliance　　　　　　　　　　　**May 2021 — Aug 2021**
Python, TensorFlow, Keras, MLFlow, Spark, Scala, SQL　　　　*Toronto, ON*
- Created and trained text classification models using LSTM with 97% accuracy on 50 million records to simplify long workplace accident descriptions into one or two custom labels
- Applied feature engineering to improve the MSE of a time series forecasting model (FB Prophet) by 15% to predict upcoming trends in workplace accidents and potential types of accidents
- Designed efficient pipelines for incoming data to be translated, cleaned, labelled by NLP models, and stored every day

Software Engineer / eCompliance　　　　　　　　　　　**Jan 2021 — Apr 2021**
JavaScript, Dart, Flutter, Cypress, GitHub Actions　　　　*Toronto, ON*
- Automated entire test suites on web and mobile platforms to significantly improve QA and development processes
- Streamlined weekly deployments to become automated with deployment pipelines on a daily basis
- Identified and resolved multiple bugs, taking part in a substantial reduction from 100 issues to 20 issues

QA Analyst and ETL Developer / Teranet　　　　　　　　　　　**May 2020 — Aug 2020**
C#, .NET, SSIS, MS SQL, T-SQL　　　　*Mississauga, ON*
- Engineered memory efficient ETL packages with advanced SQL validation to ensure data correctness for half a billion records
- Designed creative solutions in C# to standardize complex and ambiguously structured inputs and data

EXTRACURRICULAR ACTIVITIES

Developer Relations Engineer / Aipaca　　　　　　　　　　　**Jan 2022 — Present**
Python, PyTorch, Keras, JavaScript, AWS, SageMaker　　　　*Toronto, ON*
- Contributor to an open-source toolbox for predicting the training time and cost of machine learning models on AWS instances
- Organized a summit for 150+ participants from multiple clubs and companies to network and deploy ML projects with Aipaca
- Technical writer and editor for Aipaca posts, blogs, and documentation

Techical Lead and Executive / University of Waterloo Computer Science Club　　　　　　**May 2021 — Sept 2022**
Typescript, SQLite, Discord.js, GCP, Docker, Git　　　　*Waterloo, ON*
- Cultivated a healthy community of 2500 people, growing with over 100 new online members a month
- Assisted in coordinating multiple academic/social events and networking opportunities for many companies and students
- Delegated and implemented features/improvements for a Discord bot with a currency, coffee chat, and anti-spam system

Hackathon Lead Organizer and Mentor / SpartaHacks　　　　　　　　　　　**Jan 2019 — Sept 2019**
Python, JavaScript, HTML, Docker, Blockchain　　　　*Guelph, ON*
- Planned event and attained major sponsorships, ensuring event success at no-cost for all 120+ participants
- Ran introductory Blockchain, Docker, and Python workshops to audiences with various computing skill levels