Kyros Ke

(+1)438-488-6677 | bowei.ke@umontreal.ca | | Montreal, Canada

EDUCATION

Université de Montréal - Montreal Institute for Learning Algorithms　Montreal, Canada
Master of Computer Science (Major: Machine Learning)　*Aug. 2022 – April 2024*

Tokyo Institute of Technology　Tokyo, Japan
Master of Engineering | GPA:3.9/4.0　*Sep. 2017 – Aug. 2019*

Dalian University of Technology　Dalian, China
Bachelor of Engineering | GPA: 3.7/4.0, Minor in Mathematics　*Sep. 2013 – Aug. 2017*

EXPERIENCE

AI/ML Intern　Jan 2024 – Apr 2024
Employment and Social Development Canada (ESDC)　*Ottawa, Canada*
- Evaluated and analyzed federal and provincial public news articles weekly and provided statistics on volume, length, and topic distribution.
- Engaged in research on various GPT models within Azure OpenAI Studio, exploring prompt engineering techniques to optimize news article summarization for accuracy and contextual relevance.
- To implement a comprehensive cost analysis of deploying LLMs on Azure, detailing expenses for data processing, storage, and model execution for budget planning.

Machine Learning Intern　May 2023 – Dec 2023
Mila Start-Up Soralink　*Montreal, Canada*
- Engineered an industrial-grade time-series signal anomaly detection system, integrating sliding window techniques with 4 distinct prediction models, achieving 87% precision across 74 measure points
- Managed large-scale data and models using AWS S3 and utilized MLflow to track results and parameters of ML experiments, maintaining a clear workflow.
- Developed customized conversational prompts enabling clients to interact with large language models(LLMs) to identify potential root causes and solutions for over 20 detected anomaly types

Business Analyst　Nov 2020 – Feb 2022
China Academy of Information and Communications Technology　*Beijing, China*
- Designed data infrastructure and logic enabling real-time data refresh and customized alerts for hotspot monitoring web application, improving data latency by 75%
- Developed supplier base by analyzing and structuring data on 500+ suppliers, reducing search time by 30%

Data Scientist　Sep 2019 – Sep 2020
International Civil Aviation Organization　*Montreal, Canada*
- Built scrapers with Scrapy and Selenium to construct corpus of 200K civil aviation reports for analytics
- Productionized ML pipelines for corpus analysis with spaCy and Gensim, achieving 80% entity extraction accuracy
- Generated civil aviation word corpus from NLTK-processed textual data to develop an internal AI assistant

PROJECTS

Micrograd - Tiny Autograd and NN Library | Python, Autodiff, PyTorch, DAG　Jan 2023 – Feb 2023
- Implemented an autograd engine performing reverse-mode autodifferentiation over a dynamically built DAG
- Chopped neurons into individual ops enabling autodiff over scalar values to train networks for binary classification
- Demonstrated training deep neural nets on benchmark datasets using custom autograd and NN lib

ML in cow behavior recognition | Python, LSTM, CNN, Data Augmentation　Jun 2018 – Mar 2019
- Performed feature engineering and selection on time series data from sensors capturing cow movements behavior
- Constructed LSTM network achieving 83% accuracy in classifying behaviors like grazing, sleeping
- Implemented data augmentation strategies to address limited training data, boosting CNN model accuracy to 97%

TECHNICAL SKILLS

Languages: Python, C/C++, SQL (MySQL, PostgreSQL), CSS/HTML, JavaScript
Libraries/Framworks: NumPy, pandas, scikit-learn, Tensorflow, Keras, PyTorch, microgrid
Developer Tools: Git, Shell,MLflow, AWS, Microsoft Azure