Alexander Cooper

Machine Learning
Backend Engineering

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Languages

Python
Javascript/Typescript
C++
Racket

Libraries

Tensorflow
PyTorch
SciKit-Learn
NumPy
Matplotlib

Databases

SQL
Redis
MongoDB
BigQuery
Excel

Tools/Frameworks

Linux/Bash
Git
Docker/Kubernetes
Google Cloud/AWS
FastAPI/Flask/Django
NodeJS
HTML/CSS
LaTeX

Relevant Work Experience

Junior Machine Learning Engineer at Yaar

Toronto | 2021

- Worked on a fast paced, agile and small team at a startup developing an AI personal assistant
- Delivered our app's integration with Uber. Involved modeling, training, testing and deployment of various ML models.
- Stayed up to date and implemented current research in deep learning, NLP and vision.
- Followed test driven development best practices.
- Worked extensively with FastAPI and node.js to build out internal app servers.

Administrative Counselor at Frontier College

Northern Canada | 2018-2019

- Worked in a team to run a literacy camp in remote First Nations/Inuit communities of Attawapiskat and Inukjauk
- Managed a budget, organised community events, implemented a curriculum and dealt with the unique challenges of a northern life

Projects

Canadavotes.dev

Tools: PyTorch, FastAPI, Docker, PostgreSQL, nginx, Redis, node.js

- Created a website that uses data mined from twitter to track popularity of political leaders in real-time
- Created a data pipeline that scrapes, processes and stores data from twitter automatically
- Deployed a state of the art language model to classify sentiment of political tweets using Pytorch and Torchserve
- Implemented a cache with Redis to improve speed and reduce server load

Shakespeare Translator

Tools: Tensorflow, Beautiful Soup, Selenium, Pandas

- Language model that translates between Modern and Shakespearean English
- Used Tensorflow and various deep learning/NLP techniques to train/tune an advanced language model
- Used web scraping to create a large dataset with BeautifulSoup/Pandas

Recreation of Self-Learning Monte Carlo Methods

Tools: Python, NumPy, Scikit-Learn

- Developed software as part of a small team
- Wrote an implementation of algorithms presented in a scientific paper
- Used a linear regression model to optimize a Monte Carlo simulation for a computational physics model

Education

Bachelors of Science, Physics. University of Waterloo

2020

- Relevant Courses: Machine Learning in the Physical Sciences, Computational Physics I/II
- Varsity Track and Field Athlete

Certifications:

Google Cloud Qwiklabs Profile

- Google Cloud Essentials, Data Science on Google Cloud, Machine Learning APIs, Baseline: Infrastructure, Baseline: Data, ML, AI, BigQuery Basics for Data Analysts