Ngawang (Choenden) Kyirong

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Interests

Practical applications of ML, AI audio/music, MLOps, Software Development

Education

Simon Fraser University — Burnaby, British Columbia
B.Sc in Computer Science — Jan 2018 – Present
B.Sc in Statistics — Jan 2018 – Present

University of Toronto — Toronto, Ontario
Jazz Performance — Sept 2014 – April 2016

Selected Coursework

- Machine Learning, NLP, Data Science, Bayesian Stats, Software Engineering

Technical Skills

Programming Languages
Python, JavaScript, R, SQL, MATLAB

ML/DS Tools
PyTorch, TensorFlow, Pandas, NumPy, Matplotlib, Scikit-learn, spaCy

Software Development & Databases
Node.js, Express.js, Flask, HTML/CSS, Docker, CI/CD, SQL, MongoDB

Employment

Samsung, R&D Institute — Vancouver, British Columbia
Data Analyst Intern — Incoming Spring 2022

WorkSafeBC, Innovation Team — Richmond, British Columbia
Machine Learning Engineer Intern — Summer 2021
Designed and implemented a medical entity recognition system using spaCy and the MeSH ontology. Annotated training data for a multi-label classification model. Improved searching algorithm using fuzzy matching in Whoosh.

BetterCart Technologies, Development Team — Saskatoon, Saskatchewan
Data Scientist & Software Development Intern — Spring 2021
Conducted literature review in NLP for relevant topics and techniques. Increased product matching accuracy by adding an image similarity layer using ResNet. Automated training data generation using spaCy pattern matching for a NER pipeline. Scrape and gather data from websites using Pyppeteer.

CBSA, Data Analytics Division — Ottawa, Ontario
Data Scientist Intern — Summer 2020

Implemented a language identification tool using a n-gram char model in pytorch. Contributed to an adjusted SIRD model to analyze and predict how COVID-19 spreads.

Projects

Blackfoot Language Project, Data Science & Back-end Dev Fall 2021
Heroku, Cloudinary, Amazon S3, Python, Flask, Librosa, pydub, numpy
Developed the backend server of this web application using Heroku, Flask, and cloudinary to store user recorded audio .wav files. Worked on a feature to provide feedback on how well users pronounce Blackfoot terms using analysis of Mel Spectrum's.

Hope Health Action, Software Development Spring 2021
Node.js, Express.js, Docker, MongoDB, Mongoose, Gitlab, CI/CD
Automated development process by constructing a continuous integration & continuous deployment pipeline. Led back-end engineering for MVC design, data modelling, and built a variety of endpoints and services.

Music Generation, Machine Learning Spring 2020
Deep Learning, TensorFlow, Keras, NumPy, Pandas, Music21
Generated music using a LSTM and a Bi-Directional LSTM with Attention using midi files of classical based piano music.

Toxic Comment Classification, Machine Learning Fall 2019
Deep Learning, PyTorch, Keras, Pandas, Numpy, MatPlotLib, Jupyter
Achieved 90% accuracy for multi-label classification of toxicity level of tweets. Used a 200-D GloVe embedding produced as input into a LSTM model.

Miscellaneous

Science Peer Mentor Fall 2021
Guide, support, and provide connections for first year science students.

Statistics Mentor Fall 2020
Mentored undergraduate statistics students at SFU.

BC Student AI Showcase Dec 2019
Presented project on Toxic Comment Classification to students, industry members, and the public.

Java Workshop May 2018
Instructed a class on Java and OOP concepts for 60 high school students.

Awards/Scholarships

3rd Place Overall (Vancouver DataJam) 2021
2nd Place Technical Solution (SFU Business Analytics Hackathon) 2020
Moe Koffman Memorial Jazz Scholarship (University of Toronto) 2014
Entrance Scholarship (University of Toronto) 2014

Other Interests

Music composition, Piano, Trombone, Tennis, Basketball, Soccer