Jizhou Wang

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Academic Profile

Dedicated to technology, computing and striving to achieve personal and educational goals. I am always enthusiastic about teaching myself new skills while helping others and sharing intriguing ideas in life, philosophy and computer science. Recently I have been analyzing and visualizing data from Hockey Games, Online message boards and sequential images using methods of Deep Learning.

Education

University of Montreal (Mila) | Graduate   **2021 - 2022**
Prof. MSc. in Machine Learning

McGill University | Undergraduate   **2015 - 2019**
B.Sc. Computer Science & Statistics

Varndean College | College   **2010 - 2012**
A-levels (Maths, Physics, Computing), Brighton, UK

Achievements and Working Experiences

Hockey Goal Prediction Project|University of Montreal   **September 2021**
https://github.com/Jawing/ift6758-blog-template-main
- Performed exploratory data analysis on NHL play-by-play data by building an interactive 2D shot-heatmap using plotly and ipywidget.
- Built and tested an ensemble of models using sklearn pipeline while tracking experiments and model iteration on comet.ml
- Developed a goal prediction service on flask with docker using the top-performing models based on their ROC-AUC such as XGboost.

NaviGaze|Code Jam Hackathon   **November 2019**
https://devpost.com/software/navigreat-hviz0n
- Designed a chrome browser extension that automatically generates a table-of-contents from any page and keywords, key sentences from any text selections for text summarization.
- Developed the backend extractive text summarization model using TextRank algorithm with spaCy and Flask.

Toxicity Detection Project|McGill   **November 2019**
- Compared performances across multiple models such as CNN, LSTM, and a lexical model using ROC-AUC metrics for detecting toxicity while reducing biases across different identity subgroups.
- Worked with state-of-the-art pre-trained transformer models (BERT, GPT) and word embeddings such as word2vec, GloVe.

Modified MNist Classification Project|McGill   **October 2019**
- Incrementally tested hyperparameters such as loss functions, optimizers, normalization, dropouts, preprocessing and augmentations (OpenCV) for image classification.
- Worked with state-of-the-art CNN models (Resnet, EfficientNet) and developed ensembles to further increase classification accuracies.

Irrelevant.ai |ImplementAI Hackathon https://devpost.com/software/irrelevant-ai   **September 2019**
- Designed a movie recommendation system with a two-stage supervised learning model from Fast.ai using collaborative filtering and an unsupervised learning model on Scikit-learn with K-means clustering.

- Developed an algorithm that lets the user escape the recommendation feedback loop while maintaining a high predictive user rating.

Hotel Database Project |McGill   January - April 2018
- Worked in teams to analyze and understand business and user requirements to create a detailed database design model of a hotel.
- Wrote complex queries and functions using SQL and Java languages for applications to interact with the database.

Centre Saint-Antoine 50+ Web Designer | Montreal, QC   May - August 2017
- Created a responsive mobile redesign of the website using jQuery, Bootstrap, and AngularJS.
- Improved the accessibility of the UI for the elder clients

Software Engineer Intern Microsoft | Beijing, China   July - August 2015
- Maintaining web components and websites for new and existing clients using HTML, CSS, jQuery, Bootstrap, and AngularJS.
- Prototyped "MicroFriends" a social networking app for interns on android/iOS during the Microsoft Hackathon

Competitive Programming: Kaggle, Leetcode   March 2015 - Present
- Currently competing in Kaggle competitions and have reached the top 10% on many leaderboards using state-of-the-art models and methods.
- Solved many programming problems on Leetcode and became efficient with applying data structures and algorithms.

Personal Skills

Language: English (Fluent), Mandarin (Fluent), French (Intermediate), Japanese and Spanish (Beginner).
Computer Language: Python, R, Java, Matlab, HTML/CSS, JavaScript, Git, Bash, MySQL.
Software: Pytorch, Jupyter Notebook, R Studio, Visual Studio Code, Flask, Eclipse.
Communication: Empathetic Communication, Customer Service, Public Speaking, Team Spirit.

Extracurricular Activities

Computer Science: Deep Learning, Natural Language Processing, Computer Vision, and Quantum Computing. Participated in the ImplementAI and CodeJam Hackathon (McGill 2019).
Mathematics: Competed in Competitions such as MathCounts (Winner of Tri-Cities Regional 2009) and UK Senior Mathematical Challenge (Silver award 2011)
Music: Certified Pianist (RCM), Regional competitions (First place WSTMA). Performance on stage (Camerata Musica 2009). Amateur guitarist and rhythm game fanatic.
Sports: Competed in regional competitions for cross country, biking, tennis and table tennis.
Others: Enthusiast in strategy games, linguistics, art, and philosophy.