Geoffrey Meric

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Education

McGill University Sep 2020 - Dec 2024
Bachelor of Science in Computer Science, GPA 4.00/4.00 *Montreal, Canada*

Technical Skills

Languages: Python, JavaScript/TypeScript, C++, Java, C, HTML/CSS, SQL, Bash
Frameworks and Libraries: Node.js, Jest.js, pandas, NumPy, TensorFlow, Qt, MapReduce, scikit-learn, Matplotlib
Technologies: Git, shell scripting, REST APIs, GraphQL, Cloud Computing (AWS, GCP), Docker, Jira, CI/CD

Experience

Incoming Machine Learning Engineering Intern May 2024 - Aug 2024
Autodesk *Montreal, Canada*
- Optimizing the Retrieval-Augmmented Generation pipeline in the Autodesk Assistant chatbot LLM architecture

Software Development Intern May 2023 - Aug 2023
Autodesk *Montreal, Canada*
- Implemented real-time job logging infrastructure in Python within a cloud rendering Autodesk Maya plug-in
- Engineered new workflows in the plug-in allowing for an approximately 3x increase in job submission throughput
- Introduced new UI elements for the plug-in using the Qt framework through PyQt, enhancing the user experience
- Developed a CLI with the Listr2 TypeScript library to enable simultaneous live monitoring of rendering job progress and automatic downloading of job outputs and logs as they're generated
- Designed a comprehensive Jest.js test suite to ensure robust validation of CLI outputs and downloads

Software Engineering Intern May 2022 - Aug 2022
Procter & Gamble *Geneva, Switzerland*
- Developed a Python documentation tool to programmatically generate visualizations of the Pampers Customer Data Platform (CDP) architecture by interfacing with Segment's API via GraphQL, generating graphs using D3.js
- Deployed a GitHub Actions workflow configured using YAML to sync CDP architecture changes in documentation
- Implemented a Python Airflow-automated data pipeline on Google Cloud Platform, interfacing with Braze REST APIs to fetch user change data and loading it to BigQuery, improving incident tracking across CRM operations
- Created a Node.js web app using Braze APIs to automate CRM operations in 20+ markets

Software Development Intern Jun 2021 - Aug 2021
Teqoya *Paris, France (remote)*
- Implemented data analysis capabilities in JavaScript and generated interactive graphs using Chart.js for a live air quality sensor data visualization web application used to test the efficacy of air purification devices

Projects

Quantitative Trading Algorithm Implementations | *Python, sklearn, QuantConnect*
- Implemented and backtested an open interest based trading strategy in Python on QuantConnect, leveraging insights from a finance research paper on using options open interest data to predict future equity prices
- Developed a combined momentum and mean-reversion strategy using multiclass regression to select positions

Chess Engine | *C++, Artificial Intelligence*
- Created a chess engine in C++ using the minimax algorithm with alpha-beta pruning to search the game tree

Latent Semantic Analysis-based Document Query Tool | *Python, NumPy, scikit-learn, Natural Language Processing*
- Leveraged Singular Value Decomposition to query documents based on a reference document or search prompt

Chrome Extension - RateMyProfs McGill | *JavaScript, HTML/CSS*
- Published JavaScript Chrome extension linking professor *ratemyprofessors.com* profiles in course selection webpages

Rudimentary Operating System | *C*
- Created a basic operating system in C featuring a command shell, process scheduling and memory management

Sign Language Image Classification | *Python, pandas, TensorFlow*
- Implemented a MultiLayer Perceptron from scratch in Python to classify a dataset of sign language images
- Created a Convolutional Neural Network using TensorFlow Keras, achieving 95% classification accuracy