

Bilal Jaffry

BACHELORS OF SOFTWARE ENGINEERING

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Summary

- Programming Languages: **Python, SQL, Java, C, C++**, C#, Go, R, JavaScript
- Tools: **Unix/Linux, Git, LaTeX, PyGame, Tensorflow**, Docker, Agile/Scrum

Education

McMaster University

Hamilton, Ontario

BACHELOR OF ENGINEERING IN SOFTWARE ENGINEERING CO-OP

Sept. 2016 - April 2021

- Member of McMaster Software Engineering Club
- Former Moderator for McMaster Geeksquad Club
- Director of Projects for McMaster Artificial Intelligence Society
- **Capstone Design Project** - Developed a mobile app via React Native for recommending parties of users suggested media based on their similarly liked preferences using collaborative filtering methods

Experience

TD Canada Trust

Toronto, Ontario

SOFTWARE DEVELOPER CO-OP

May. 2019 - Apr. 2020

- Developed C# and SQL enhancements to legacy ETL packages (Extract Transform Load), increasing efficiency of production processes, ensuring data was received unchanged to downstream recipients
- Communicated constraints and requirements to business partners and stakeholders during shared infrastructure & internal related currency upgrades
- Created and maintained quality code, consistent with quality standards; provide code maintenance and support during testing cycles and post-production deployments
- Managed builds and deployments of SQL and C# code through development, pre-production and production environments

McMaster Artificial Intelligence Society

Hamilton, Ontario

DIRECTOR OF PROJECTS

May. 2020 - Present

- Oversaw the development of 5 different project teams consisting of 30+ individuals remotely online, ensuring project resources were correctly allocated
- Assisted all project teams in resolving issues blocking progress of ongoing projects, such as providing computing resources for training and storage via cloud computing platforms like Google Collab Pro and Microsoft Azure
- Established the use of software development lifecycle methodologies by adopting agile & scrum frameworks through the use of GitHub & ZenHub
- Organized the 1st annual Projects Expo, presenting the work to a panel of judges from the Vector Institute and members of the Engineering Faculty

Projects

Deep NES - Machine Learning AI

Hamilton, ON

DELTA HACKS 5

Jan. 26 - Jan. 27 2019

- Designed an AI machine learning agent to complete the first level of the NES game, Super Mario Bros
- Used Tensorflow framework through the Python library, Gym-AI to use Reinforced Learning methodologies for training of the agent.

CoviDash

Hamilton, ON

PYTORCH 2020 SUMMER HACKATHON

June - Aug. 2020

- Designed a COVID data-visualization tracker providing a heatmap of cases on various across various regions and cities in Ontario
- Utilized a trained LSTM model in PyTorch to forecast 7 days of COVID-19 cases in Ontario using publicly available datasets

Beasley Neighborhood Association (Traffic Tracker)

Hamilton, ON

GITHUB

Sep. 2020 - Present

- Produced a real-time traffic monitoring and analytic dashboard for tracking the usage of streets in Hamilton using IoT devices
- Developed a working Docker container for the uses of encapsulating machine learning training code on real-time video data streamed by nVidia Jetson Nano
- Created a SQL Database instances and stored procedures for the purposes of storing and parsing real-time video data for use on the web interface layer
- Utilized YOLOv5 and Deepsort for detection and tracking of entities over frames of video data streamed over a distributed Kafka service
- Generated data from detection & tracking used for creating a visual heatmap of the frequency of objects detected for all video frames