Mark Baula

Software Engineering Technology   mbaula@my.centennialcollege.ca

Education

Centennial College   Sep 2023 – Present
Ontario College Advanced Diploma - Software Engineering Technology (Co-op)
CGPA: 4.32/4.5

University of Waterloo   Sep 2019 – April 2023
Completed work towards a B.A.Sc. in Honours Mechatronics Engineering

Skills Overview

Languages: Python, JavaScript, TypeScript, SQL, C, C++, Matlab
Tools/Frameworks: Pandas, Cypress, Selenium, React, Scikit-Learn, Keras, OpenAi Gym, dbt, Snowflake, Git

Experience

Software Engineer – **Borderless**   Sept 2022 – Dec 2022
- Developed automated E2E testing suite from ground up using Cypress and contributed to developing unit tests for every new feature added. Integrated with the GitLab CI pipeline
- Participated in establishing database schemas and developed API paths and endpoints for real-time payments
- Implemented reusable and testable components with React to foster a consistent user experience
- Utilized dbt, Snowflake, SQL and Python to organize and create business defined entities as part of ETL pipeline
- Spearheaded the creation of interactive dashboards and reports on revenue, TPV and client growth using Looker
- Used Datadog and Mixpanel to monitor and debug production and demo systems using queries and dashboards

Data Analyst – CIBC   Sept 2021 – Apr 2022
- Implemented Selenium and Pandas with the development of a web scraper application to automate the compilation of interest rate data from various competitor websites
- Modularized codebase in the scraping tool, reducing lines of code by 60% and improving run time by 20%
- Performed daily quality assurance on generated data reports, ensuring data integrity
- Assisted in the development of a VBA macro reducing the time to record data from reports by 70%

Software Developer – University of Waterloo/NRC   Jan 2021 – Apr 2021
- Assisted in the development of OpenAi Gym environments to model chemistry labs for developing new RL and active learning algorithms for automated materials discovery
- Conducted unit tests with up to 80% code coverage for continuous integration with Travis CI

Software Developer – University of Waterloo Biomechatronics   Sep 2019 – Jan 2020
- Prototyped a wearable device used by Parkinson's patients to implement biofeedback to correct their gait cycle
- Worked with Python and Matplotlib to graph associated angles of the knee during the gait cycle
- Examined and analyzed over 300 data points, collected with Tracker and organized with Excel

Projects

DeepLearning.ai Projects
- Implemented YOLO object detection algorithm to detect cars in a picture and output them inside bounding boxes
- Utilized Keras and LSTM networks to generate a 30-second improvised jazz solo
- Generated art with deep learning by transforming images into different styles using neural style transfer

ViSimulate
- React web application that simulates various visual impairments in real-time using image-processing algorithms