Jonathan Sanjay

Machine Learning and Software Engineer

Research-driven and highly organized leader bringing articulate communication skills and strong attention to detail.

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Mississauga, Canada

EDUCATION

University of Toronto

BASc Engineering Science, Major in Machine Intelligence, Minor in Robotics & Mechatronics

09/2020 - Present *Toronto, Canada*

EXPERIENCE

Software Engineer

Martinrea International Inc.

09/2023 - 08/2024

Achievements/Tasks

- Utilized Django, Docker, Redis, Nginx, and Jinja to build a scalable and robust backend infrastructure for our platform.
- Implemented a comprehensive user management system, encompassing OAuth 2.0, authorization, and password management.
- Spearheaded the creation of an app store-like platform, enabling users to publish, download, and distribute software solutions for manufacturing challenges.
- Led the development of a Business Intelligence web application to aid in the business' decision making.
- Created a production screens app for the factory floor to receive real-time updates on manufacturing demands, from concept to deployment.

Data Science Intern

Cognitive Systems Corp

05/2021 - 08/2022

Achievements/Tasks

- Ran statistical analyses within software to process large datasets.
- Compiled, cleaned and manipulated data for proper handling.
- Developed polished visualizations to share results of data analyses.
- Extracted data from devices connected to API's to develop topology maps of a given network.

Research and Development Project Manager

University of Toronto Hyperloop Team

09/2020 - 09/2023

Achievements/Tasks

- Managed a mechanical subteam to design and manufacture dynamic suspension system.
- Managed R&D team to develop Electrodynamic wheels to provide levitation and propulsion for Hyperloop pod.
- Researched and improved methods to prevent wearing of Neodymium Magnets.
- Coordinated with international Arc Magnet suppliers.

SKILLS

Python	●●●●●
C	●●●●○
MATLAB	●●●●●
Java	●●●●●
Tensorflow	●●●●●
Pytorch	●●●●●

PERSONAL PROJECTS

AI Piano Accompaniment Generator (01/2023 - 09/2023)
Trained Neural Networks to generate a piano accompaniment for any given melody. Built data pipelines to process data before training.

"Coup" App (12/2021 - Present)
Developing an app based on the popular strategy card game, "Coup".

Speech Synthesis (12/2021 - Present)
Training Neural Network to clone voices and generate English speech.

Webscraper App Development (06/2020 - Present)
Researched and developed python algorithms to deal with language processing, information extraction and text classification.

Seam Carving (03/2021 - 04/2021)
Implemented Seam Carving in C for content-aware image resizing.

Autocomplete (02/2021 - 03/2021)
Created a C Implementation of the text autocomplete functionality.

Gomoku (10/2020 - 11/2020)
Created a Python program that could play Gomoku against a player.

ACHIEVEMENTS

The Shaw Scholarship - Value of $15,000
Awarded by the University of Toronto to a student who demonstrates high academic achievement, leadership skills, and design capability.

Certificate of Distinction - UWaterloo Cayley Contest
Ranked in the top 25% of contestants in the Waterloo Cayley Contest in the year 2018.

Certificate of Distinction - UWaterloo Pascal Contest
Ranked in the top 25% of contestants in the Waterloo Pascal Contest in the year 2017.