Ajaybir Singh Randhawa

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Education

Ryerson University - Computer Science **2019 - 2023**

CGPA: 3.89/4.33, Dean's List for all years

Experience

Junior Data Scientist - Ministry of Transportation **May, 2021 - December, 2021**

- Collaborated with senior developers in translating business requirements into queries
- Collected and cleaned data of 10,000+ entries, using SQL and Databricks, a relational database
- Structured training for a classification model to count and identify vehicles across 40 cameras
- Gained theoretical experience into variety of ML models including VAE's, GAN's and DNN's
- Built customized Excel models to reduce testing time and errors by 30% and improve pipeline

Private Beta Tester for Open AI **April, 2021 - May, 2021**

- Experienced participant in OpenAI's API private beta testing, actively testing and providing feedback to enhance performance, scalability, and usability for over 100 hours
- Worked with the development team to refine and enhance the API performance contributing to over 5 iterative improvements

IT Assistant - AR Renovation Supplies **March, 2019 - May, 2020**

- Streamlined risk quantification and management models via quantitative data analysis based on client requirements and increasing productivity by 50%
- Regression modeling and forecasting material and parts demand with 70% accuracy
- Increased product tracking efficiency by 150% through systematic and automatic product logs

Hackathon - IEEE Ryerson (1st Place) **October, 2020**

- Led a team of three and brainstormed solutions to multiple challenges in Python
- Facilitated work with team members to tackle solutions using SDLC Methodologies
- Constructed solutions via divide and conquer, thread parallelism and other algorithms by 60%

Skills

Languages:	Python · HTML · R · Javascript · Bash · Java · C/C++ · SQL · Smalltalk
Databases:	MongoDB · MySQL · PostgreSQL · Azure Databricks · Excel
Frameworks:	Django · React · Agile · Waterfall
Technologies:	PowerBI · Git · Jupyter · Azure · RESTful APIs · Docker · JSON · Google Cloud
Other:	Accurate · Creative · Collaborative · Efficient · Reliable

Projects

Face Generator - Python · Tensorflow · Google Collab **Demo** **Repo**

- Utilized a ProGAN for 256x256 image generation to gain a better understanding of GAN's functionality and apply existing theoretical knowledge of machine learning
- Built upon the existing Nvidia GAN neural network to create a face generator using Tensorflow
- Optimized computational resources by using google cloud computing and pretrained models vs personal machine, to gain a 30% increased accuracy and reconstruction of image rate

Motion Detection - Python · Keras **Repo**

- Converted a pose estimation library from image to a continuous video to draw a skeleton using 3 high-performance algorithms, predictive and classification models with a respective API
- Established a model usable for improving physical exercises and sign language interpretation
- Conducted unit-testing and debugging to improve video quality and reduce loss rate by 25%