

Naoroj Farhan

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EDUCATION

Bachelor of Science, University of Toronto

Honours Bachelor of Science in Computer Science

Toronto, ON

Sept. 2023 – June. 2027

Relevant Coursework

Calculus with Proofs, Linear Algebra I/II, Foundations of Computer Science I/II

Extracurriculars

NeuroTechUofT Student Design Team, UofT AI Community Engagement Team

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, HTML, CSS

Developer Tools: Spyder, Pycharm, Jupyter Notebook, Google Colab, Eclipse, Code::Blocks, VS Code, Visual Studio

Libraries: NumPy, TensorFlow, Matplotlib, pandas, seaborn

PROJECTS

Housing Price Predictor | *Python, NumPy, Matplotlib*

Sept. 2023 – Oct. 2023

- Analyzed housing price data and **selected relevant features** to train the models, using **one-hot encoding** to transform categorical data where needed
- Established **multivariable linear regression** as baseline model and implemented a **neural network model** from scratch using only the NumPy library
- Achieved **40-50% reduction in mean-squared error** for the neural network from the baseline through **hyperparameter tuning** of iterations, learning rate, and model architecture

Stock Market Data Analysis | *Python, seaborn, Matplotlib*

Sept. 2023 – Oct. 2023

- Analyzed stock market data on large companies with the yahoo finance API, creating graphs of **closing price, stock, volume, moving, average, and daily returns** with respect to time by using Matplotlib
- Applied seaborn **heatmaps** to visualize the **correlation coefficients** of different stocks in order choose a well-balanced portfolio

Self-Driving Car Simulation | *JavaScript*

Aug. 2023 – Aug. 2023

- Implemented a **neural network** to control the motion of a car on the road
- Implemented artificial sensors to get data for distance of car from oncoming traffic and road borders for input layer
- Developed a **reward function** for the car that penalizes hitting traffic and other road borders

EXPERIENCE

Kumon Math and Reading Instructor

Aug. 2022 – Aug. 2023

Kumon Math and Reading Centre - Richmond/Fanshawe

London, ON

- Accurately and efficiently marked the homework that Kumon students brought in
- Answered any questions students asked and provided hints to guide them.

Highschool Competitive Programming Club Co-president

Sept. 2022 – Jun. 2023

London Central Secondary School

London, ON

- Co-founded the club with 3 other co-heads and delegated weekly to discuss how to operate the club
- Directed weekly **30-60 minute** presentations on challenging informatics contest topics
- Expanded club from 4 co-heads to up to **15-20 members** showing up weekly

AWARDS

AMC12 - 2x American Invitational Mathematics Examination Qualifier

Nov. 2021, 2022

Hypatia Mathematics Contest - Honor Roll

Apr. 2022

Canadian Senior Mathematics Competition - Honor Roll and School Champion

Nov. 2022