PARTH PATEL

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EDUCATION

University of Toronto **2018-Present**

- 4th Year B.A.Sc. candidate pursuing double major in Mathematics and Statistics.

Technical Skills:

- Python, R, SQL, Tableau, TensorFlow, PyTorch, IBM Cloud, SAS, GitHub, MS Office Suite

WORK EXPERIENCE

***Senior Math Instructor* – Mathnasium Learning Centre** **Sept 2019-Present**

- Teaching 20+ senior high school and university students by communicating challenging fundamentals in a clear, thorough manner, resulting in a collective improvement in scores by 30%.
- Leading 3 instructors efficiently by making quick decisions and delegating tasks appropriately to facilitate maximum productivity and customer satisfaction.

PERSONAL PROJECTS

Amazon Book Customer Review Classification using Multiple Classifiers **July 2021**

Tech Stack: Python, SQL, Pandas, Bag-of-words, Scikit-Learn.

- Performed **ETL process** using **SQL** and **Pandas** on 11,000+ instances of unstructured eCommerce data by extracting text-based key-value data from 5 JSON files, cleaning and transforming to usable data for natural language processing technique, **Bag-of-words.**
- Developed and compared machine learning models such as **SVM**, **Naïve Bayes**, **Decision Tree**, and **logistic regression** using **Scikit-Learn**, with parameter and data tuning. Testing accuracy with **F1 Scores** of 86-88% concluded logistic regression to have the most optimal results.

Neighborhood Business Classification Model using K-Means Clustering **Jan 2021**

Tech Stack: Python, Scikit-Learn, Pandas, NumPy, Beautiful-soup, FourSquare API, Tableau

- Built a K-means clustering algorithm using **Pandas** and **Scikit-Learn** to run on **data scraped** from 3+ webpages using **Beautiful Soup**, and querying through **FourSquare APIs** of all businesses for 2100+ neighborhoods in Toronto.
- Created data visualizations by transforming 6 tables and visual frequency graphs revealing clusters of neighborhoods with similar business environments using **Tableau** for effective communication for the non-technical audience.

Number Recognition using Artificial Neural Network Classifier **October 2020**

Tech Stack: Octave, Photoshop

- Created and cleaned +100 raw images of handwritten digits from 0-9 in **Photoshop** with distinct handwriting to ensure unbiasedness and versatility in data.
- Implemented and trained an artificial neural network model using **Forward propagation** and **Backward propagation** in **Octave** with **Regularized Gradient Descent** on images for classification, resulting in 95.7% testing accuracy.

RELEVANT CERTIFICATION

IBM Data Science Professional Certificate **Dec 2019 - Jan 2020**

- Developed skills in creating SQL queries for databases, Data visualization, and Machine learning in Python, tools, and techniques for data analysis.

Stanford Machine Learning Course **April-Aug 2020**

- Learned ML fundamentals such as gradient descent, multivariate regression, multiclass classification, neural networks, SVM's, PCA, and solving overfitting problems.

CO-CURRICULAR ACTIVITIES

University of Toronto Machine Intelligence Student Team (UTMIST) **Jan 2021-Present**

- Collaborate with team members to create and deliver live monthly machine learning fundamentals workshops for newer members in the AI community.