TAPOPRIYA MAJUMDAR

Montréal, Canada ⋄ (438) 505-7182
tapopriya.majumdar@umontreal.ca

SUMMARY

Canadian **permanent resident** with more than three years' experience in Machine Learning and Big Data, and a background in Mathematics and Computer Science from elite universities. Proficient in python, R, SQL, PyTorch, Keras, spark and hive technologies.

TECHNICAL STRENGTHS

Scalable Data	Hadoop, Hive, AWS EC2 and S3, Spark (Spark SQL, MLlib)
Operating Systems	Ubuntu Linux, OS X
Computer Languages	Python, R
Machine Learning	scikit-learn, NumPy, pandas, NLTK, forecast, dplyr
Neural Network	Keras, PyTorch, TensorFlow (basic)
Data Visualization	Tableau, matplotlib, Seaborn, ggplot2
Databases	SQL (Oracle SQL Developer), NoSQL (MongoDB)
Miscellaneous	Git, agile, docker, tmux, LaTeX

EXPERIENCE

Scalian Inc. March 2020 -
Senior Data Scientist *Montréal, Canada*

Working on a distributional reinforcement learning project

Canadian National July 2019 - December 2019
Senior Data Scientist (Contract Position) *Montréal, Canada*

Worked on an object tracking project to detect signals and people from a live video feed

Université de Montréal January 2019 -
Graduate Researcher *Montréal, Canada*

Natural Language Processing researcher in the **Recherche Appliquée en Linguistique Informatique** laboratory, currently working in Neural Machine Translation and Language Modelling

Fidelity Investments June 2017 - July 2018
Associate Software Engineer / Data Scientist *Bangalore, India*

Worked in the following projects:

- PSS Optimization: Optimizing the number of associates required in a unit using time series analysis
- Detect and Repair: Classification of tickets using machine learning techniques on text descriptions
- EDA Tool: Browser based data summarization and visualization program using big data techniques
- Data Exfiltration: An anomaly detection algorithm to analyze IP addresses and check for improper system access

InterpretOmics India Pvt Ltd May 2016 - May 2017
Data Scientist / Statistician *Bangalore, India*

Completed the following projects:

- Drug Target Discovery: Constraint-based modeling techniques on genome-scale metabolic models to find potential biomarkers that affects the growth in the diseased cells alone.
- Patient Stratification: Machine learning techniques are used to stratify disease sub-types/groups from the population using biomarkers (gene expression) and clinical markers (phenotype).

Galvanize, Inc October 2015 - February 2016
Data Science Fellow *San Francisco, CA*

Completed a rigorous 12-week program implementing a variety of data analysis methods and machine learning techniques.

Ohio State University September 2008 - April 2015
Graduate Teaching Assistant *Columbus, OH*

Recitation instructor and grader for various undergraduate courses

EDUCATION

Université de Montréal, Canada (ongoing)
Master's in Computer Science (Concentration in Artificial Intelligence)

- Master's Thesis: Working on Language Modelling and Neural Machine Translation.

Ohio State University, USA May 2015
PhD in Mathematics ***(all but dissertation)***

- Research Topic: Geometric (Elliptic) Partial Differential Equations. Worked on finding solutions to Dirichlet type fully nonlinear equations on Riemannian manifolds.

Université Bordeaux 1, France & Università di Padova, Italy February 2008
ALGANT Master in Mathematics

- Master's Thesis: Studied the large sieve technique in Analytic Number Theory and its application to the Bombieri-Vinogradov Theorem.

Chennai Mathematical Institute, India August 2005
B.Sc. in Mathematics (Hons.)
Minor in Computer Science

THEORETICAL KNOWLEDGE

Regression & Classification	Linear Regression, Logistic Regression, SVM, Random Forest, LDA, Boosting, Naive Bayes, kNN
Dimensionality Reduction	PCA, SVD
Clustering	k-Means, Hierarchical, DBSCAN
Time Series	ARIMA, Exponential Smoothing
Text Analytics	Smoothing, POS-Tagging, Text Embeddings, Parsing
Neural Networks	CNN, RNN, LSTM, Transformer, VAE, GAN

ACADEMIC ACHIEVEMENTS

- Ranked 5^{th} at the CSIR-UGC NET Examination for Mathematics in December 2016. This is a national level test in India undertaken by tens of thousands of applicants to determine eligibility for college and university level lecturership.
- Recipient of the prestigious **Erasmus Mundus** scholarship awarded by the European Union while attending my Master's.
- Selected with full tuition waiver and a scholarship to the Bachelor's Programme at Chennai Methematical Institute through a national level entrance test. It is one of the topmost undergraduate programs for Mathematics in India with less than 2% acceptance rate.

PERSONAL

Immigration Status	Permanent Resident
Citizenship	Indian
Languages	English (proficient), Bengali (mother tongue), Hindi (proficient)
Interests	Reading, Travelling, Racquetball, Classic Rock