MICHAEL ARMANIOUS

DATA SCIENTIST

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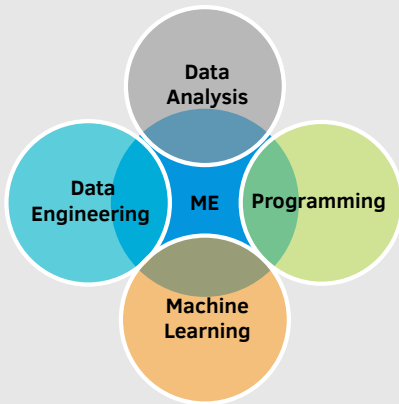
in /in/michael-armanious

○ michaelarman

Technical Skills ——

Overview

Programming

R • Python • SQL

SAS • Minitab • Neo4j

LaTeX • Java • HTML

Education ——

MSc., Statistics
(CGPA: 9.2)
Carleton University
2018 - 2019 | Ottawa, ON, Canada

BSc., Mathematics & Statistics
(CGPA: 8.1)
Carleton University
2014 - 2018 | Ottawa, ON, Canada

Relevant Coursework

•Categorical Data Analysis •Bayesian Analysis
•High Dimensional Analysis •Advanced Data Mining
•Time Series Forecasting •Multivariate Analysis
•Survey Sampling •Combinatorial Optimization
•Regression Analysis •Stochastic Processes & Applications •Analysis of Variance & Experimental Design

Experience

May 2017 - Present	**Research Analyst**	Canada Revenue Agency - GST/HST Directorate

- Creating and analyzing big data Relational Graph Databases using Neo4j and SAS
- Analyzed a wide range of raw data, searched for trends and deviations, and created detailed documentation of the insights
- Creating classification and prediction models using various machine learning algorithms such as Random Forests, XGBoost, Neural Networks, etc. to classify and predict which taxpayers should be audited
- Extracting important variables in large datasets to refine analysis
- Data cleaning and preprocessing big data using SQL, SAS and Python to use for analysis
- Conducted reports to management about graph database schemas
- **Tools**: SAS, Anaconda, R, Python, Neo4J, Netezza SQL, Excel, HTML

Sep 2018 - Aug 2019	**Research Assistant**	Carleton University

- Researched various applied statistics algorithms with Master's Supervisor, **Shirley Mills** to handle different types of data
- Implemented several data mining algorithms in datasets such as OUA (Ontario University Athletics) basketball using the Synergy Sports Technology to create **reports**
- **Effectively communicated findings to the coach in simple terms**

Sep 2018 - Apr 2019	**Graduate Teaching Assistant**	Carleton University

- Nominated for *Outstanding TA Award*
- **Data Mining - STAT 4601/STAT 5703**: Tasked with assisting students with Data Mining projects using R Studio and teaching them proper data mining techniques including data cleaning, data preparation, data analysis and write-ups
- **ANOVA and Experimental Design: STAT 3504** & **Sampling Methodology: STAT 3507**: Taught tutorials and demonstrated how to use SAS in order for the students to complete their assignments
- **Introduction to Statistical Modelling: STAT 2507**: Taught tutorials for students taking intro to statistics and showed them how to use Minitab and how to interpret findings

Research & Projects

2018 - 2019	**MSc. Candidate, Graduate Research Assistant**	Carleton University

Master's Project: Data Mining on OUA Basketball

- Explored data to search for structure/patterns/factors/clusters by performing visualization and summary techniques
- Incorporated classification and clustering algorithms in order to gain meaningful insights on Basketball data
- Scraped and cleaned data from the OUA website to use for analysis
- **Tools**: R,R Markdown, RShiny, SQL, Python; BeautifulSoup, scrapy, selenium, requests, scikit-learn, pandas, numpy, matplotlib, tensorflow, bokeh

2017-2018	**Data Mining Projects**	

Project: Steganalysis

- Completed a research project on steganalysis (the study of detecting messages hidden using steganography; this is analogous to cryptanalysis applied to cryptography) using data mining techniques

Project: Heart Disease Analysis

- Completed data mining final project on heart disease dataset displaying many insights using several data mining techniques such as association mining, clustering, SVM, Neural Networks, Visualization, etc