Aditya Samaroo

Queens, New York | adityasamaroo@gmail.com | (917) 373-6339 | linkedin.com/in/adityasamaroo

EDUCATION

Master of Science in Data Analytics Engineering (Sept 2018 - May 2020)

Northeastern University, Boston, MA

Bachelor of Science in Physics (Aug 2014 - May 2018)

Adelphi University, Garden City, NY

ACADEMIC PROJECTS

- **University College Database Design**

  Designed a database and generated data for a university using SQL that includes information regarding students, faculty, courses as well as buildings.

- **Analyzing Traffic Patterns in NYC**

  Created a word cloud that visualized the most apparent causes of accidents in NYC. Also determined the times of day each day when accidents occur the most.

- **Restaurant Reviews in Japan Visualization**

  Using Tableau, created a time series of the number of restaurant goers as well as density maps of the most popular places to dine in Japan. Tree maps, pie charts and bar charts were also created to better differentiate the types of restaurants visited by patrons across Japan.

- **Forest Fire Classification Model**

  Using a supervised learning technique, classified wildfires based on features into one of twelve different causes.

- **Solving a Sudoku Puzzle using Artificial Intelligence**

  Using algorithms such as brute force and simulated annealing, develop a program that solves a 9x9 sudoku grid with various degree of difficulty.

- **Analysis of Air Quality in the United States**

  Visualized air quality across the United States using historical data from EPA. Created density maps of different pollutants that were measured such as particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone and lead as well as health issues related to air quality.

- **Loan Approval Prediction Model**

  Developed a model that determines whether a loan applicant is approved or denied based on various indicators. Models such as linear regression, support vector machines and random forest models were used to compare performance.

- **COVID-19 Data Visualization**

  Visualized data related to COVID-19 infection, density maps of areas that are considered hotspots and various other visualizations that is listed by county.

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EXPERIENCE

Research Intern (Jan 2018 - May 2018)

Computational Science Initiative, Brookhaven National Lab, Upton, NY

- Performed material simulations on modern supercomputers and quantum computing platforms
- Compared simulations against experiment and theory
- Created graphic animations of quantum simulations
- Presented research at the 2018 New York Scientific Data Summit (NYSDS)

Undergraduate Researcher (Oct 2016 - Nov 2017)

College of Arts and Science, Adelphi University, Garden City, NY

- Developed a two-dimensional model using MATLAB simulating the behavior of glass beads in a plastic cone with a wind blower
- Research was done in collaboration with another research group creating a model of a clean coal apparatus
- Presented research at the 2017 Adelphi Research Conference (AURC)

Help Desk Assistant (Aug 2014 - Dec 2017)

Information Technology Department, Adelphi University, Garden City, NY

- Maintained computers and printers across campus
- Assisted students and faculty with technical issues on campus computers, personal devices in person, over the phone and Livezilla Support System
- Resolved technical issues with media devices in classrooms

Technical Skill Set

- Programming: MATLAB, Python, R, Java, SQL
- Database: MySQL, MongoDB, SQL Server
- Data Visualization: Tableau, ggplot2, Matplotlib, Seaborn, Pandas
- Tools: Excel, Jupyter, RShiny, Anaconda, Spark, Databricks, Azure Data Studio, MongoDB Compass
- Analytics: R, Python, MATLAB, Excel

PUBLICATIONS

- “Using IBM-Q to study and visualize the ground state properties of the Su-Schrieffer-Heeger model” — NYSDS 2018