Ayush Chakraborty

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Education

Dartmouth College — Hanover, NH
MS in Quantitative Biomedical Sciences — *Aug. 2021 – Dec 2022*

University of Maryland — College Park, MD
BS in Computer Science, Minor in Statistics — *Aug. 2017 – May 2021*

Experience

DevOps/Big Data Intern — June 2019 – August 2019
Flydubai — *Dubai, United Arab Emirates*

- Developed a REST API using FastAPI and PostgreSQL to store data from learning management systems
- Developed a full-stack web application using Flask, React, PostgreSQL and Docker to analyze GitHub data
- Explored ways to visualize GitHub collaboration in a classroom setting

Projects

Virtual Reality Locomotion | *C, Unity Engine, Git, Visual Studio* — Fall 2018

- Constructed a Virtual Museum for the Philips Collection Museum in D.C. as part of a research project. A Virtual Reality implementation in a museum has the potential to reach a far broader audience.
- This project presents a test-bed and space for experimentation to design and evaluate immersive experiences and architectures before they are developed at full scale. Implemented using Unity, Visual Studio, C for scripting, SDK's like GoogleVR SDK, VRTK SDK, and SteamVR SDK was used.

Musico | *Python, Flask, Bootstrap, Git, Heroku* — Fall 2019

- A user-friendly, secured flask app (inspired from Reddit) for music enthusiasts where one can browse through different "musico" pages, and interact with any posts.
- Published plugin to websites gaining 2K+ downloads and an average 4.5/5-star review
- Implemented continuous delivery using TravisCI to build the plugin upon new a release
- Collaborated with Minecraft server administrators to suggest features and get feedback about the plugin

Stockets | *Python, Pandas, NumPy, Google Finance API* — Summer 2021

- Performed an analysis on the Stock Market which basically monitors the stocks and opening prices of Google Stocks.
- Did a comparison of Tesla, Ford and GM stocks, opening prices, market cap, volume trading and cummulative returns.
- Used several probability theory like Correlation and Scatter Matrix, Daily percentage change, volatility and Box Plots.

Classification of Mortgage Affordability | *Python, Pandas, NumPy* — Summer 2021

- Performed an experiment to analyze and predict whether affordability can be standardized depending on regions using the Mortgage Affordability data from Zillow.
- Finding out which algorithm was suitable: decision tree vs logistic regression, random forest vs decision tree, K-nearest neighbours vs random forest

Technical Skills

Languages: Python, Java, R, C, SQL, MATLAB, Ruby, OCaml, Rust, LaTeX, SAS, Bash Script, Git
Developer Tools: Microsoft Azure, Docker, Jenkins, My SQL, MongoDB, Android Studio, Anaconda, PowerBI
Related Coursework: Algorithms, Introduction to Artificial Intelligence, Human-Computer Interaction, Computer Vision, Android Development, Computer Architecture, Data Structures, Introduction to Statistical Computing with SAS, Applied Probability and Statistics I II, Applications of Linear Algebra.