Ali Abbas

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Education

University of British Columbia — OIS Scholar Sept 2023 – Apr 2027
Vancouver BC, Canada

Mathematics, Minor in Data Science, BSc

The Outstanding International Student Award is a merit-based entrance scholarship.

Projects

"StaTracker" App | *Java, JSON* Jan 2024 – Present

- Developed a Java-based game statistics tracker application enabling users to view, store, and manage match data for multiple games.
- Implemented a graphical user-interface, as well as a console-based user interaction, allowing users to add match statistics, view game-specific statistics, and calculate averages.
- Employed data persistence to the project, allowing users to save and load data to/from a file system (JSON).

Classification Analysis - Heart Disease Patients | *R, JupyterLab* Sept 2023 – Jan 2024

- Leveraged R programming and classification techniques to develop predictive models for early diagnosis of heart disease, using datasets from a Heart Disease Database.
- Employed R to select and preprocess relevant columns from the datasets, enabling accurate predictions of heart disease based on a variety of patient factors.
- Utilized classification methods, such as k-nearest-neighbors, in R to address the pivotal question: "Can a patient's likelihood of being diagnosed with heart disease be determined through the analysis of diverse factors?
- Classified the testing set, with an accuracy of about 77.5%, precision of 79.7%, and recall of about 75.0%

Stock Market Analysis Tool | *Python, Pandas, Matplotlib, NumPy* March 2022 – June 2022

- Created a Stock Market Analysis/Prediction tool
- Utilised regression analysis via evaluation metrics, such as RMSE and MAPE, which used the predicted values and actual values to measure the accuracy of the program.
- Used technical analysis which takes measurable data from the market like historical returns, volume of trades, and prices.

Personal Website | *HTML, CSS, JavaScript* March 2023 – July 2023

- Created and Maintained the website using HTML and CSS while adhering to standards in the style guide.
- Implemented fluid animations using CSS and JavaScript, improving user-experience.
- Leveraged tools like Figma for wireframing and prototyping to streamline the design process.
- Enhanced understanding of web design principles, including layout, typography, and color theory.

Awards

UKMT Maths Challenge | *United Kingdom Mathematics Trust* March 2018 – Nov 2022

* UKMT Junior Maths Challenge - Bronze Certificate
* UKMT Intermediate Maths Challenge - Silver Certificate
* UKMT Senior Maths Challenge - Silver, Gold Certificates

Miscellaneous | *BEBRAS Computing, Euclid, CodeBozu* Nov 2021 – Nov 2022

* Elite BEBRAS Computing Challenge 2021, 2022 - Certificates of Merit
* Euclid Maths Contest 2022 - Distinction
* CodeBozu Fellowship Advanced Level - Certificate of Merit

Technical Skills

Languages/Frameworks: Java, Python, C, JavaScript, HTML/CSS, R, Racket, Pandas, Matplotlib, JupyterLab
Software: LaTex, Git, Github, Adobe Photoshop, Microsoft Office, Figma