Roshani Vijayan

Bachelor of Computer Application Honours with Research (4 year Degree : 2023-27)
Expert in C/C++/Python, LINUX, DBMS, DSA and Software Application Development

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EXPERIENCES

J.P. Morgan Chase, USA   **September 2023**
Asset Management - Internship
- Gathered clients' key investment objectives, risk appetite, investment restrictions, and other relevant information to enable recommending a suitable investment solution
- Constructed suitable investment portfolios for two individuals based on their unique risk profiles
- Carried out quantitative fundamental analysis for two stocks and made a recommendation to clients based on their investment objectives
- Calculated Key Performance Indicators (KPIs) for a clients' investment portfolios

New York Jobs CEO Council, USA   **September 2023**
Financial Analyst - Internship
- Completed a Simulation focused on financial analysis as an Analyst on the technology team at an investment bank.
- Played a pivotal role in aiding senior bankers to determine the feasibility of establishing a partnership with BigTechCompany.
- Demonstrated strong communication skills by articulately presenting findings and opinions to senior bankers.

Prudential Group Investment Management (PGIM, USA)   **August 2023**
Fixed Income - Internship
- Learnt and completed various tasks on actual business case on Fixed Income Asset Management.
- PGIM Fixed Income Introductory course
- Credit Research task: Extracting Key Financial Information & Calculating Adjusted EBITDA
- Portfolio Analysis Group task: Calculate Portfolio's Key Performance Indicators
- Credit Research task: Presenting a Listed Company's Earnings
- Client Advisory Group task: Manage Investment Exposure Breach

J.P. Morgan Investment Bank, USA   **July 2023**
Investment Banking - Internship
- Completed J.P. Morgan Investment Banking Virtual Experience Program on Forage - August 2023.
- Merger & Acquisition targets
- Target information and auction process
- Financial analysis – DCF Model for Valuation and Sensitivity Analysis
- Investment recommendation

WorldQuant University, USA (Remote)   **22nd July 2023 (16 weeks)**
Data Science Lab - Student Intern

Responsibilities: Successfully completed a 16-week and 8 end-to-end, applied data science projects of the Applied Data Science Lab module at WorldQuant University. The projects included scientific computing, data wrangling, machine learning and natural language processing with Python.
- **HOUSING IN MEXICO:** A dataset of 21,000 properties was used to determine if real estate prices are influenced more by property size or location. Imported and cleaned data from a CSV file, built data visualisations, and examined the relationship between two variables using correlation.
- **APARTMENT SALES IN BUENOS AIRES:** Built a linear regression model to predict apartment prices in Argentina. Created a data pipeline to impute missing values and encode categorical features, and then improved the model performance by reducing overfitting.

- **AIR QUALITY IN NAIROBI:** Built an ARMA time-series model to predict particulate matter levels in Kenya, extracted data from a MongoDB database using pymongo, and improved model performance through hyperparameter tuning.
- **EARTHQUAKE DAMAGE IN NEPAL:** Built logistic regression and decision tree models to predict earthquake damage to buildings, extracted data from a SQLite database, and revealed the biases in the data that can lead to discrimination.
- **BANKRUPTCY IN POLAND:** Built random forest and gradient boosting models to predict whether a company will go bankrupt, navigated the Linux command line, addressed imbalanced data through resampling, and considered the impact of performance metrics precision and recall.
- **CUSTOMER SEGMENTATION IN THE US:** Built a k-means model to cluster US consumers into groups, used principal component analysis (PCA) for data visualization, and then created an interactive dashboard with Plotly Dash.
- **A/B TESTING AT WORLDQUANT UNIVERSITY:** Conducted a chi-square test to determine if sending an email can increase program enrollment at WQU, built custom Python classes to implement an ETL process, and created an interactive data application following a three-tiered design pattern.
- **VOLATILITY FORECASTING IN INDIA:** Created a GARCH time series model to predict asset volatility, acquired stock data through an API, cleaned and stored it in a SQLite database, and then built an API to serve model predictions.

Interglobus Trading Private Limited, Pune (onsite)   **20th March 2023 - 23rd June 2023**
Intern - Software Development

Responsibilities:

- **Web Development (www.interglobustrading.com):** Designed, coded, and modified company website, from layout to functionality, according to specifications or project requirements. This involves using programming languages such as HTML, CSS, JavaScript etc.
- **Front-End Development:** Developed user interfaces that are visually appealing, user-friendly, and responsive. Implemented designs and ensured seamless integration with back-end systems.
- **Back-End Development:** Building and maintaining server-side applications and databases to support admin web applications. This includes handling server requests, managing databases, and implementing APIs for data exchange.
- **Troubleshooting and Debugging:** Identified and fixed bugs, performance issues, or other technical problems within web applications. Conducted thorough testing and quality assurance to ensure smooth functioning of the website across different browsers and devices.
- **Security and Performance Optimisation:** Implemented security measures to protect web applications from potential vulnerabilities, such as cross-site scripting (XSS) or SQL injection. Optimised website performance, including page load times and overall responsiveness, to provide a smooth user experience.
- **Collaboration and Communication:** Collaborated with cross-functional teams, including designers, other developers, and project managers, gathered requirements, clarified specifications, and ensured timely completion of projects.
- **Documentation and Maintenance:** Documented codes, project requirements, and technical specifications for future reference. Performed periodic maintenance tasks, such as updating software versions, fixing broken links, and monitoring website performance.

PROFESSIONAL CERTIFICATIONS & ACHIEVEMENTS

- **Professional Certificate in C Programming with Linux (2023)** : **Dartmouth College, USA** (An Ivy League research university, USA). Five certificates on Advance C programming and two certificates on Linux. Scored 100% marks in each certification courses. (https://records.edx.org/75f70b19b26d41bf81a236fb8dded8f4)
- **Duke University, USA. Certificate for Programming Fundamentals & Algorithms** : (https://www.coursera.org/account/accomplishments/certificate/RPM4JBV9WZ3B)
- **CFA Investment Foundations Certificate (CFA Institute, USA, ID: 9368975)** : Passed and certified by CFA Institute USA, on Mar 21, 2022. https://investmentfoundations.cfainstitute.org/ Performance above 99 percentile among the entire cohort. (https://basno.com/abxdbto9/certificate)
- **MIT, USA Certificate** : Becoming an Entrepreneur, 89% marks, Certificate issued on March 23, 2017.
- **TOEFL** (ETS, USA, Appointment Number   ̖ Score : 103 out of 120, TOEFL iBT taken on December 04, 2022 having test scores as Reading : 27/30, Listening : 21/30, Speaking : 28/30, Writing : 27/30

- **SAT Score Report** (College Board, USA,) **:** Achieved total score of 1190 on Dec. 03, 2022 with a week preparation (School pre-board examination was going in parallel).
- **Google Generative AI Certifications:** Generative AI Fundamentals, Responsible AI, Large Language Models (Sept 2023)
- **Google Analytics Certification :** Google Analytics Academy, October 2013.
- **Power Searching with Google :** Certificate by Google, October 2012.

EDUCATION

• **Bachelor of Computer Application Honours with Research (4 Year Degree : 2023 - 27) : Banasthali University**, World largest women university and highly reputed, NAAC A++ graded full time residential university at Rajsthan, India

• **Indian School Certificate (CISCE – ClassXII) :** Passed from **The Bishop's School, Pune**, India, one of most renowned school of India, Certificate issued in May, 2023 in Commerce stream with 65% marks. Main subjects are Accountancy, Business Studies, English, Commerce and Economics.

• **Secondary School Examination (CBSE - Class X)** : Passed from **The HDFC School, Pune**, India with 68% marks, Certificate issued in August, 2021. Main subjects are Mathematics, Science, Social Studies, English and French.

• Primary and Secondary Schooling at **RAIS, Bangkok**, Thailand (https://rais.ac.th/) having long term international exposure.

SKILLS & HOBBIES

- **RUBIK CUBES** (2x2, 3x3, 4x4, 5x5) solver in a minutes. (https://en.wikipedia.org/wiki/Rubik%27s_Cube)
- **AWS DeepRacer** : Amazon DeepRacer championship to code and automated car using reinforcement learning (RL) . Actively participate in DeepRacer Machine Learning challenge and completed three laps of driving circuit in 3.30 minutes. https://aws.amazon.com/deepracer/
- Ability to learn new languages fast. Basic French and Japanese apart from different Indian languages.
- Well versed in playing Guitar and English vocals
- Avid book reader : Non fiction and fictions

PERSONAL INFORMATION