Swetha Ramesh

Leicester, UK | +44 7917582181| swetha.ramesh1998@gmail.com
Linkedin | Portfolio | GitHub | Credly

OBJECTIVE

A motivated recent graduate with a master's in advanced computer science and 2 years of corporate experience, specializing in data analysis and visualization projects. An avid learner currently engaged in mastering innovative technologies to stay at the forefront of the field.

EDUCATION

University of Leicester — Leicester, UK

MSc in Advanced Computer Science — 01.2023- 06.2024

Core Modules: Big Data and Predictive Analytics, Data Driven Service design, Agile Cloud Automation, Internet, and cloud computing, Interaction Design and User Experience.

Grade: Distinction

Atria Institute of Technology — Bengaluru, India

Information Science & Engineering CGPA — 07.2016- 07.2020

Core Modules: Data Structures, Software Engineering and Testing, Object Oriented Concepts, Design and analysis of Algorithms, Cloud Computing, Python Programming, Machine Learning and Big Data Analytics. Grade: Merit

WORK EXPERIENCE

Test Automation Analyst, IBM — **02.2021 to 11.2022**

- Led the testing of AT&T's Enhanced Push-to-Talk (EPTT) application, validating its functionality and performance for real-time communication used by first responders.
- Employed **Excel**, **Jira**, **Git**, and **Selenium** to manage and automate 100+ test cases, enhancing test efficiency by 30%. Leveraged **power BI** for comprehensive test data analysis, driving a 25% improvement in the testing process.
- Collaborated cross-functionally to troubleshoot technical issues, driving a 20% improvement in software systems. Maintained comprehensive test data documentation and delivered technical support to end users.
- Integrated CI/CD pipelines using Jenkins to streamline test automation workflows, resulting in a 15% reduction in deployment times and quicker feedback loops.
- Participated in code reviews and continuous integration practices to ensure the reliability and scalability of automation scripts.

Intern, Atria IOT labs — **10.2019 to 11.2019**

- Developed an event reservation system using **RFID** tags with **python, SQL** and IoT technologies, collaborating on a 4-week project.
- Integrated IoT solutions using Python, improving system efficiency by 40% in a high-paced, collaborative team environment.

Intern, Hindustan Aeronautics Limited (HAL)- — **04.2018 to 05.2018**

- Collaborated with the HAL IT Department to revamp the CRM and Payroll System, focusing on data management and system optimization and reduced processing time by 20%. Enhanced online presence and ERP functionality by utilizing .Net framework and SQL for web development.
- Acquired practical proficiency in people analytics within HR and finance systems for over 2000 employees, honing problem solving and critical thinking capabilities.

CERTIFICATIONS & SKILLS

- **Certifications:**
  - **AWS** certified Cloud practitioner
  - Microsoft certified **Azure fundamentals**
  - Python for **Data Science**
  - Python Basic issued by **Hacker Rank**
  - IBM Agile Explorer
- **Skills**
  - Languages**:** Python, SQL, Java, C++.

- Python Libraries: Pandas, Numpy, Matplotlib, Seaborn, Plotly, Scikit-learn, NLTK, TextBlob.
- Tools: Docker, Kubernetes, Jenkins, Jira, Flourish.
- Data Transformation: Excel(Array Formulas, Data Manipulation), Power BI, Tableau
- Project Management: Jira, Git, SVN.
- IELTS overall score 8.5

PROJECTS

- **Dissertation: Sentiment Analysis of UK Train Services Using Twitter Data**
  - Implemented a project analyzing public sentiments toward UK Train Operating Companies (TOCs) using Twitter, employing NLP and machine learning techniques.
  - Leveraged advanced tools and methods including Python (twscrape, WordCloud), Tableau, Flourish; Algorithms and Accuracy : Naïve Bayes (74.30%), Logistic Regression (76.32%), SVM (76.1%), GBM (71.4%), Random Forest(74.53%) and Decision Tree (67.2%). The comparison showed that Logistic Regression, SVM, and Random Forest are the best performers.
  - Established that Logistic Regression leads with an accuracy of 76.32%, followed by SVM at 76.17%, with both models doing equally well across precision, recall, and F1-score criteria.
  - Created data visualizations (word clouds, regional sentiment maps) using Python, Tableau and Flourish to interpret sentiment trends effectively.
  - Conducted a user evaluation study to assess the visualization effectiveness, informing decision-making processes for TOCs and policymakers.
- **Neighborhood Property Price Analysis and Predictive Modeling for Strategic Insights:**
  - Designed visualizations by employing **Matplotlib, Plotly, and Power** BI to examine, clean, and present intricate data-sets. Discovered detailed patterns like how property prices vary by neighborhood and change over time.
  - Compared a basic linear regression model with a more advanced one that included methods like **K-means clustering** and **random forest regression**.
  - Found that the advanced model performed better with an 87% accuracy and additionally translated the complex datasets into clear, actionable insights, demonstrating the ability to support strategic decision-making—skills applicable to optimizing marketing campaigns and evaluating performance metrics.
- **Distributed Whiteboard Application on Azure:**
  - Led the collaborative development and deployment of a real-time, distributed whiteboard application on Azure, showcasing expertise in cloud architecture, application development, and seamless integration with **Azure Web PubSub.**
  - Transformed a stand-alone application into a scalable and collaborative platform, while identifying areas for future enhancements in data persistence and scalability.
- **Detection of tomato growth state and surveillance system using computer vision and IoT:**
  - Implemented an IoT and **computer vision**-powered **data analytics** system for monitoring tomato growth stages.
  - Optimized irrigation practices using a Raspberry Pi, DHT sensor for environmental data collection, and **Python's OpenCV** for image processing and analysis, enabling data-driven decision-making through the correlation and modeling of visual and sensor data.
  - Published In JETIR ISSN UGC Approved & 5.87 Impact Factor| Date of Publication: 2020-06-08.

OTHER EXPERIENCE

- Student Mirror board student representative at the University of Leicester.
- Café Assistant at Sainsbury's Café.
- Volunteered 20+ hours per month at a non-profit café in Leicester, supporting community outreach and event planning.
- Volunteer at a local animal shelter in Bengaluru, India.