

Vijay Sivakumar

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EDUCATION

Rutgers University, New Brunswick <i>Masters of Science – Data Science (GPA - 3.7/4.0)</i>	8/2023 – 12/2024
Ramaiah Institute of Technology, Bengaluru <i>Bachelor of Engineering - Information Science and Engineering</i>	8/2017 – 7/2021

SKILLS

Programming Languages: Python, R, Java, C, HTML, MySQL, MongoDB.

Libraries and Frameworks: TensorFlow, Open CV, NumPy, Pandas, Pytorch, Matplotlib, Seaborn, Scikit-learn, Keras, XGBoost.

Others Software/Tools/IDEs: Power BI, Tableau, Git, Atlassian Jira, Selenium, Postman API, SAP ERP, SAP S4 HANA, Microsoft Excel, SPSS, Snowflake, Visual Studio code, Jupyter Notebook, Eclipse, Anaconda.

General Skills - Supply Chain Management, Root Cause Analysis, Statistical Modelling, Forecasting, Agile Methodologies, Computer science, Business Analytics, Data Visualization, Information Systems, Deep learning, Pattern Recognition, Stock Market Analysis, Large Language Models, Generative AI, NLP, Communication Skills, Data Modelling, Business Intelligence, Predictive Analysis.

WORK EXPERIENCE

Rutgers Health (IHHPAR), New Jersey <i>Research Project Assistant</i>	8/2024 – 1/2025
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- Conducted data analysis and applied machine learning techniques on COVID-19 data for the IRON PREP Trial, identifying patterns and insights using Python and SAS.
- Analyzed large datasets for the CAPHE project, revealing a 5-year reduction in lifespan for Asian Americans compared to counterparts in native countries. Provided support for lecture preparation, coding, and data cleaning across various projects.

Rutgers Access and Disability Resources, New Jersey <i>Accommodation Assistant - Statistics</i>	8/2024 – 1/2025
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- Reformatted class notes, presentations, study materials, and statistical code outputs (SPSS, R) to ensure compatibility with screen readers (JAWS, NVDA), while providing personalized support to blind students by clarifying statistical concepts and interpreting analytical outputs, thereby enhancing their academic accessibility and understanding.

Mercedes-Benz Research & Development India, Bengaluru <i>Software Engineer</i>	8/2021 – 8/2023
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- Streamlined end to end testing process for XRP, TIS and XW applications by automating extensive test suites using Java and Selenium framework; resulting in a 50% reduction in testing time, improving overall release efficiency.
- Developed a Python script to automate Jira sprint board creation and updates, leveraging Jira REST API for seamless project management and workflow automation.
- Collaborated on the parts and services recommendation system project, and presented learnings to the clients using KPI's.
- MBRDI Artificial Intelligence Community core team member and ISTQB Certified Tester Foundation Level.

Kimberly-Clark India Private Limited, Bengaluru <i>Data and Analytics Intern</i>	1/2021 – 7/2021
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- Decreased costs by 23,500 USD yearly on an average, by implementing the Supplier data quality dashboard.
- Spearheaded the entire project of "Supplier Data Synchronization", for master data management.
- Modelled a system to detect the locations of the data discrepancies between the MDG (Master Data governance) and ECC systems. Made use of data warehousing and ETL tools like SAP ERP, SAP S4 HANA and BODS for backend development.
- Created a wireframe for the live-dashboard and implemented it using Power BI for business visualization.
- Optimized product performance through comprehensive tuning efforts, resulting in a 40% decrease loading times and yielding better user satisfaction. Presented to and collaborated with stake holders for project execution.

PROJECTS

Uber/Lyft Fare Price Prediction Algorithms & concepts used – OLS Regression, LASSO, Decision Tree & Ridge Regression, Bagging Regressor (Bootstrapping). Developed a predictive pricing model for Uber and Lyft rides through comprehensive regression analysis & attained a 96% accuracy.	8/2023 – 11/2023
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Twitter Search Application Developed a Twitter search application using triune database architecture (Snowflake, MySQL, MongoDB) for data management, ETL, and querying. Improved query performance by 70x with intelligent indexing and caching. Integrated machine learning for topic modeling, sentiment analysis, and emotion detection, offering deeper insights.	2/2024 – 5/2024
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Exemplify: Exam Preparation tool An NLP-driven exam preparation tool that automates question paper and flashcard generation. Fine-tuned LLaMA 3.2-1B model and implemented Retrieval-Augmented Generation (RAG), achieving 74% accuracy and a F1 score of 0.83 in QA generation and 0.72 ROUGE-L in flashcard creation, enhancing learning efficiency.	9/2024 – 12/2024
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Snake Detection using YOLO Algorithm A Deep neural network solution to a real-life problem. Used the real time object detection technique - YOLO algorithm and Open CV tool to detect snakes in agricultural fields with an accuracy as high as 82%.	1/2020 – 7/2020
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