SAHIL RAJENDRAKUMAR RAUT

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PROFESSIONAL EXPERIENCE

Graduate Research Assistant (Software Engineer) | Rutgers University | New Brunswick, NJ   Sep 2022 – May 2023
- Designed user-friendly web UI for dynamic exploration of large datasets, enabling valuable insights through standardized visualizations and employing JavaScript, jQuery, HTML5, and CSS3. Utilized Python for creating efficient visualizations with custom Decision Tree and Random Forest Estimator.
- Enhanced backend efficiency by seamlessly integrating Flask and SQL Queries, resulting in improved data extraction capabilities from databases and streamlining the process of Exploratory Data Analysis. This significantly reduced time and effort required for ML project design, leading to more efficient workflows and enhanced productivity.

Software Developer Intern | Rutgers University | New Brunswick, NJ   May 2022 – Sep 2022
- Programming and optimized models using Python, H2O, Scikit-learn, and custom implementation of Decision Tree and Random Forest Estimator.
- Developing and streamlining end-to-end flexible web UI mechanism in JavaScript, HTML5, and CSS3 for exploring any data set and providing essential trends and insights for aid in Exploratory Data Analysis.
- Expanded the backend using flask and used SQL Queries in application logic for extracting data from databases.

Graduate Teaching Assistant | Rutgers University | New Brunswick, NJ   Jan 2022 - May 2022
- Hands on lab sessions teaching R and instructing and grading for 50 plus students across Data science course.

Ernst & Young | Data Engineer   Jul 2019 – Aug 2021
- Analyzed data sets with more than 50 million-line items generating visualizations and insights, Data Integration, identifying outlier, prediction the trends and custom reports assisting in auditing priority clients.
- Build ETL/ELT pipelines and reusable tools to automate/streamline data analytics solutions
- Incorporated Computer Science, Modelling, Statistics, ETL Processing using Alteryx and Python, Data Science and algorithms to innovate and develop tools which increased the efficacy and improved the functionality of processes.
- Won the spotlight award for contribution to the project EY DIGI BRAT which secured an international level development funding and won the EY Lighthouse project award from EMEIA (Europe, Middle East, India, and Africa) region.

EDUCATION

Master of Science in Computer Science | Rutgers University – New Brunswick, New Jersey **|** CGPA: 3.75   May 2023
Bachelor of Engineering in Information Technology | University of Mumbai, India **|** CGPA: 8.64/10   May 2019
Relevant Courses: Artificial Intelligence, Data Science, Machine Learning, Natural language processing, Data Structures and Algorithms, Advanced Database Management Systems, Big Data Analytics, Cloud Computing, Software Engineering.

TECHNICAL SKILLS

Languages and Databases: Python, Java, Javascript, SQL, NoSQL, MySQL, R, C, C++, HQL hive
Libraries: NumPy, Pandas, Scikit, Math, Matplot, NLTK, Pytorch, TensorFlow, Plotly, Flask, jQuery.
Frameworks and Tools: Android, Anaconda, Tableau, Alteryx, Power BI, Unity 3D, Vuforia, Blender, Jupyter, Git, PyCharm
Web and Cloud Technology: PHP, HTML, AJAX, CSS, JavaScript, D3.js, AWS, Hadoop.

PROJECTS

Food AI using Cross Modal Representation learning   Feb 2022 – May 2022
- Optimized cross modal representation learning in food for problems such as image captioning, visual question answering.
- Built Residual Learning for Image Recognition using ResNet which efficiently extracted features from images. Streamlined BERT for WordPiece tokenization and trained CCA model along with ablation studies for performance.

Car Accident Severity Analysis   Feb 2022 – May 2022
- Created a website that provides information about the traffic accidents in USA.
- Implemented plots using D3.js and Plotly, while front-end in JavaScript using DASH and deployed through Flask.
- Incorporated time series plots and used unsupervised machine learning algorithms to find insights from the data.
- Successfully deployed application using AWS cloud services

EY Digi BRAT - Bank Reconciliation and Anomaly detection Tool (OCR, NLP, Python, SQL, Alteryx)   Aug 2019 - Mar 2021
- Our team engineered, optimized and streamlined Digi BRAT tool which reconciles bank's statement and ledger transaction using an exhaustive rule engine consisting of 25+ rules.
- Incorporated and utilized Optical Character Recognition and Natural language processing for conversion and highlighting perilous entries. Updated and improved the tool to increase efficacy of 120+ clients covering about 1400 bank accounts.

EY Skew Remover (Data Cleansing for large datasets) (Alteryx, SQL)   Apr 2020 – Aug 2021
- Spearheaded in developing and designing the skew remover tool targeting the skewed data present in datasets.
- Devised and structured advance analytical logic using Alteryx's automation that increased the efficiency and accuracy.

Architects: An Augmented Reality Application for Innovative Marketing of Architect's Portfolio   Jul 2018 - Apr 2019
- Implemented and developed an App for Architect's Building, floor plan using Blender, Unity and Android studio.
- Integrated marker less technology for seamless viewing and transformation of 3D models.