

Rahul Pavithran

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Education

Master of Science, Computer Science

New Jersey Institute of Technology (GPA: 4.00 / 4.00)

Jan 2023 – May 2024

Newark, NJ

- **Relevant Coursework:** Data Structures and Algorithms | Database Management System Design | Image Processing and Analysis | Machine Learning | Artificial Intelligence | Operating System Design | Cloud Computing | Applied Statistics

Bachelor of Technology, Computer Science and Engineering

Anurag Group of Institutions (CGPA: 9.46 / 10.00)

Aug 2016 – Jun 2020

Hyderabad, India

Experience

ValueLabs

Senior Software Engineer

Jun 2020 – Jan 2023

Hyderabad, India

- Engineered critical fixes across the stack for PHP/Magento2 E-commerce service of prominent dessert brand.
- Synthesized Flask REST APIs and data migration scripts for AI-based tender aggregator portal hosted on AWS, automating data transfer from AirTable to MongoDB with 35% improved efficiency.
- Commanded E2E development of Python CKAN based data portal on Azure (AKS, DevOps), integrating diverse data sources and APIs, reducing resource requirements by 50%.
- Coordinated with cross-functional teams in building a robust Smart Contract, scalable Express REST APIs and a CLI control panel in Node.js for a Blockchain STO Portal, doubling token control accessibility.
- Delivered multiple Python based document processing solutions enhanced by Tesseract OCR with fine-tuned LSTM engine, reducing digitization time by 20%.
- **Awards:** ValueLabs Star of the Month - Mar 2022 | ValueLabs Superstar of the Quarter - Jan 2022 | ValueLabs Superstar of the Quarter - Dec 2020

ValueLabs

Intern

Dec 2019 – Mar 2020

Hyderabad, India

- Composed unit tests for feature additions on ASP.NET MVC project utilizing xUnit testing framework, reducing development load and improving test coverage by 5%.

SmartBridge

Machine Learning Engineer - Intern

Mar 2019 – Jun 2019

Hyderabad, India

- Mentored over 150 students on fundamentals of Machine Learning and Exploratory Data Analysis utilizing industry-standard Python frameworks.

Skills

Programming Languages: Python (>10,000 lines), JavaScript (TypeScript), HTML & CSS, Go, SQL, C#, C++, Rust, PHP

Frameworks & Libraries: Flask, CKAN, SQLAlchemy, NumPy, Pandas, Matplotlib, Scikit-Learn, PyTorch, Keras, TensorFlow, OpenCV, React, Express.js, Node.js, Web3.js, ASP.NET, Apache Solr

OS & Cloud Services: Linux, Docker, Kubernetes, AWS S3, AWS Lambda, Amazon API Gateway, AWS Elastic Beanstalk, AWS Cloudfront, Azure Datalake, Azure Kubernetes Services

DevOps & Tools: Jira, Confluence, Bitbucket, Azure DevOps, GitHub, Gitlab, CI/CD, LaTeX, Visual Studio Code, Jupyter

Databases: PostgreSQL, MySQL, MongoDB, DynamoDB

Projects

SEP Event Prediction using LSTM-based Time-Series Modelling | Python, NumPy, Pandas, matplotlib, scikit-learn, PyTorch, Jupyter

- Formulated various LSTM based models in PyTorch to predict solar energetic particle (SEP) events, trained on NOAA GOES satellite data with heavy class imbalance.
- Constructed Ivy, a Python based ML training framework to automate model training and performance graph generation, reducing execution and asset management efforts in this project by 60%.

Real-time Traffic Detection | Python, NumPy, matplotlib, PyTorch, Jupyter

- Proposed and analyzed the use of neural network implementations based on YOLO series architecture for complex traffic detection of diverse road entities with >80% accuracy.
- Presented research paper at 2024 IEEE International Conference on Advanced Systems and Emergent Technologies (IC.ASET 2024).

Campus Activities

NJIT Ying Wu College of Computing

Graduate Tutor, Algorithms and Machine Learning

Jan 2024 – May 2024

Newark, NJ

- 1 of 5 tutors chosen college-wide to aid students in fundamentals of Data Structures, Algorithms and Machine Learning.
- Orchestrated online and in-person academic guidance, increasing engagement by 30%.

NJIT Department of Residence Life

Assistant to Residence Hall Coordinator

Sep 2023 – May 2024

Newark, NJ

- Generated positive feedback from residents and peers while handling administrative duties and resident concerns.
- Resolved over 4 health and safety emergency scenarios, demonstrating critical thinking abilities under pressure.