Rahul Pavithran

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Summary

Curiosity-driven Software Engineer with 3+ years of professional experience in E2E development and maintenance of reliant software systems. Experienced in Python and JavaScript full-stack development on AWS and Azure with strong Machine Learning foundations. Multi-recipient of performance awards for successful project deliveries through cross-functional collaboration in Agile environments.

Skills

Programming Languages: Python, JavaScript, TypeScript, HTML & CSS, Rust, SQL, Golang

Databases: SQL / RDBMS - PostgreSQL, MySQL | NoSQL – MongoDB, AirTable

Frameworks & Libraries: Flask, CKAN, SQLAlchemy, boto3 (AWS), NumPy, Pandas, Matplotlib, Scikit-Learn, PyTorch, React, Next.js, Express.js, Node.js, Web3.js, Drizzle ORM, Bootstrap, Tailwind CSS

OS & Cloud: Linux, Docker, Kubernetes, Helm | AWS - S3, Lambda, API Gateway, Elastic Beanstalk, Cloudfront | Azure - Datalake, AKS, AD

Tools: CI/CD - GitHub Actions, Azure DevOps | Version Control - GitHub, Gitlab, Bitbucket | Jira | Confluence

Experience

New Jersey Institute of Technology
Jan 2024 – May 2024
Graduate Tutor, Algorithms and Machine Learning — *Newark, NJ, USA*
- Selected as one of five tutors college-wide to aid students in Data Structures, Algorithms, and Machine Learning fundamentals
- Organized and facilitated online and in-person academic guidance sessions on ML strategies, boosting student engagement by 30%

ValueLabs
Jun 2022 – Jan 2023
Senior Software Engineer — *Hyderabad, TG, IN*
- Enhanced PHP Magento2-based e-commerce platform development for a popular dessert brand via CI/CD pipeline updates and critical full stack optimizations, improving customer checkout rates by 17%
- Developed Flask RESTful APIs and data migration scripts for RFT annotation portal on AWS, automating NLP annotation transfer from AirTable to MongoDB backend, achieving a 28% increase in operational efficiency
- Received the **ValueLabs Spot Award** in June 2022 for outstanding performance and contributions to team projects

ValueLabs
Jun 2020 – May 2022
Software Engineer — *Hyderabad, TG, IN*
- Led Python CKAN and Angular based data portal development, collaborating with stakeholders to integrate data sources on Azure and geospatial data support, restoring project profitability and client satisfaction
- Optimized Azure Kubernetes deployment with improved cluster organization using redesigned Helm charts, reducing resource costs by 48%
- Engineered regulatory-compliant Solidity smart contracts for blockchain and scalable Express REST APIs leveraging Web3.js for a Node.js Security Token Offering (STO) portal hosted on AWS Elastic Beanstalk, enhancing client organization equity value and accessibility
- Pioneered Python-based layout-agnostic data extraction tools for PDFs, resulting in a 26% reduction in digitization expenditure
- Received **ValueLabs Star of the Month** Award in March 2022 and **Superstar of the Quarter** Award in January 2022 and December 2020 for exceptional project contributions and leadership

SmartBridge
Mar 2019 – Jun 2019
Machine Learning Engineer - Intern — *Hyderabad, TG, IN*
- Mentored over 150 students in Exploratory Data Analysis, Data Visualization and Machine Learning, employing industry-standard Python libraries such as NumPy, Pandas, Matplotlib and Scikit-learn

Projects

DiffStudio 3D Portfolio | Next.js, TypeScript, Tailwind CSS, Drizzle ORM, PostgreSQL, AWS
- Contributed to full-stack development of management service for NeRF-based 3D scene reconstructions, hosted on Vercel with AWS S3 and NeonDB PostgreSQL for data storage.

mlinstruct | *Python, NumPy, Pandas, Matplotlib, Scikit-learn, PyTorch, Jupyter*
- Crafted Python module to manage ML model training instances and evaluation plot generation with workflow features including early stopping and model checkpoints, reducing project asset management and execution efforts by 58%

pass-man | *Golang, crypto*
- Constructed a terminal-based multi-vault password manager in Golang for local storage of domain-based password profiles, secured with AES-256 GCM encryption algorithm sequence

Real-time Traffic Detection | *Python, NumPy, Matplotlib, PyTorch, Jupyter* | *IEEE*
- Designed and implemented deep learning models for object detection based on YOLOv5 and YOLOv8 architectures for complex traffic detection, achieving >80% detection accuracy under diverse environmental conditions

Education

Master of Science, Computer Science
Jan 2023 – May 2024
New Jersey Institute of Technology (GPA: 4.00 / 4.00) — *Newark, NJ, USA*
- **Relevant Coursework:** Data Structures and Algorithms | Database Management System Design | Image Processing and Analysis | Machine Learning | Artificial Intelligence | Internet and Higher-Layer Protocols | Operating System Design | Cloud Computing | Applied Statistics

Bachelor of Technology, Computer Science and Engineering
Aug 2016 – Jun 2020
Anurag Group of Institutions (CGPA: 9.46 / 10.00) — *Hyderabad, TG, IN*