VENKATA LAKSHMI PARIMALA PASUPULETI

Email: vpasupu2@gmu.edu | Location: USA
LinkedIn | Portfolio |GitHub

PROFESSIONAL SUMMARY

Graduate student in Data Analytics Engineering at George Mason University (GPA: 3.83/4.0), **with 7+ years of experience in software engineering, data analysis, and business intelligence**. Skilled in advanced data analysis, machine learning, and statistical reporting. Experienced in mentoring and delivering technical workshops. Highly proficient in Microsoft Office Suite, detail-oriented, and reliable in meeting deadlines, passionate about supporting academic excellence and student success.

EDUCATION

George Mason University, Virginia, USA

Master of Science in Data Analytics Engineering **(Expected May 2026)**

GPA: 3.83 out of 4.0

Relevant Courses: Machine Learning Techniques for Data Analysis, Big Data Analytics, Statistical Learning, Data Mining, Predictive Analytics,NLP,LLMs

Sree Venkateshwara College of Engineering, Nellore, India

Bachelor of Technology in Computer Science and Engineering **(June 2013 – July 2017)**

RELEVANT PROJECTS

AI on FHIR: NLP-Driven Query System for Medical Records
Python, Flask, NLP, Large Language Models, FHIR, React, Docker,Mysql
GitHub: github.com/venkatalakshmiparimala /AI_on_FHIR

- Developed a secure web application that maps natural language queries to FHIR data queries using LLMs
- Integrated multilingual query support (English/Spanish) using NLP preprocessing and Spacy pipelines
- Implemented condition-aware charts, autocomplete, and real-time filters for visual analytics
- Employed role-based access controls and HIPAA compliance strategies for secure data interaction

CrashClarity: UK Road Accidents Analysis using ML ***October 2024***

Tools: R, Random Forest, Logistic Regression, GitHub Pages,Databricks
https://venkatalakshmiparimala.github.io/Portfolio/project_details.html

- Analyzed UK traffic accident data using R to uncover accident patterns and safety risks
- Conducted data cleaning, applied Random Forest and Logistic Regression models
- Developed interactive dashboards hosted on GitHub Pages to visualize results for stakeholders

Real Estate Sale Prices vs Socioeconomic Indicators (Connecticut, 2001–2022)
Tools: Python, XGBoost, Random Forest, PyTorch, Scikit-learn, Docker, Tableau

Project Link:https://mason.gmu.edu/~vpasupu2/index.html

- Implemented XGBoost and Random Forest to explore effects of crime, education, and healthcare access
- Merged multi-source datasets and applied feature engineering for regression modeling
- Created dashboards in Tableau and Python for real estate stakeholders
- Designed and fine-tuned scalable ML pipelines using PyTorch and Scikit-learn for model training and evaluation
- Benchmarked models across architectures and optimized training with GPU acceleration and batching
- Deployed inference-ready models via RESTful APIs in Docker-based microservice containers
- Automated retraining workflows and developed scripts to monitor model drift and latency

EXPERIENCE

Software Engineer ***Entrata India (Db Xento Systems), Pune*** ***Oct 2018 – Aug 2024***

- Designed and maintained scalable backend systems supporting 1M+ records and 100K+ monthly users.
- Led architecture improvements, performance optimizations, and migration projects to AWS, reducing data retrieval latency by 40%.
- Developed and documented REST APIs and data ingestion pipelines, improving reporting efficiency and data accuracy.
- Mentored and trained a team of 5+ junior engineers, providing technical guidance, code reviews, and onboarding support, enhancing overall team capabilities.
- Facilitated internal workshops on best coding practices, SQL tuning, and system design principles, demonstrating strong instructional and presentation skills.
- Automated operational tasks and batch processes using Python and Bash, reducing manual work by over 60% and improving delivery timelines.
- Coordinated cross-functional feature rollouts in an Agile environment, supporting continuous learning and collaborative problem-solving.

Associate Software Engineer ***Entrata India, Pune*** ***Jul 2017 – Sep 2018***

- Delivered 20+ full-stack modules using JavaScript, PHP, and SQL, improving system functionality and user satisfaction.
  • Resolved 100+ critical production issues, increasing system stability and platform uptime to 99.5%.
  • Optimized backend reporting queries, reducing dashboard generation times by 25%, and worked closely with product managers to define technical solutions.

Trainee Software Engineer ***Entrata India, Pune*** ***Jan 2017 – Jun 2017***

- Supported API development and participated in iterative Agile sprints, gaining hands-on experience in backend and UI module design.
- Assisted in preparing technical documentation and peer code reviews, contributing to knowledge sharing and team upskilling.

TECHNICAL SKILLS

• **Languages:** Python, R, Java, JavaScript, SQL, HTML/CSS, PHP,]
• **Tools & Frameworks:** Tableau, Power BI, Scikit-learn, PyTorch, Docker, Git, REST APIs
• **Platforms:** AWS, Databricks, Spark, Hive
• **Concepts:** Machine learning, statistical analysis, data visualization, full-stack development, software architecture,Database Architecture building,Micro Services, Natural Language Processing,LLMs