



VENKATA LAKSHMI PARIMALA PASUPULETI

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Portfolio: [Venkata Lakshmi Parimala](#)

SKILLS

Programming and Operating Systems: PHP, Python, R , Object Oriented Programming (OOPS), Unit tests, Web Services, AJAX, HTML, JavaScript, CSS, jQuery, MVC, Design patterns, Fusebox, Unix, Windows, Linux.

Testing: PHP Unit, Test Driven Development (TDD), or Behavior Driven Design (BDD), Selenium Automation

Databases & Storage: Postgres, MySQL, Oracle

Cloud Computing concepts: RDS ,AWS (S3, EC2),Data Glue.

Distributed Technologies: Hive

Environment Management: Docker or Containers

CI/CD : GitHub

Reporting Tools : PowerBI

Web Frameworks: Basic NodeJS.

Libraries/Frameworks: PyTorch, NumPy, Pandas

Methodologies: Data Analysis. Data Modeling.

Version Control, Task & project Management & Performance Monitoring: SVN, Git, JIRA, ClickUp, New Relic, Agile methodologies, Waterfall, scrum

Designing: Adobe Acrobat DC Pro, Figma, Adobe Photoshop.

Queue Management: RabbitMQ.

Embedded Systems and Debugging: Basic knowledge of embedded processors and real-time operating systems, excellent debugging skills.

Soft Skills: TimeManagement|Team Work|Problem-Solving|Documentation|Hard-Working|Presentation|Flexibility|Critical Thinking

WORK EXPERIENCE

Senior Software Engineer, Entrata India (Db Xento Systems) – Pune, India

Jan 2023 – Aug 2024

- Participated in Agile Scrum processes, leading to Sprint planning & story point estimation using Planning Poker and the Fibonacci sequence.
- Optimized database performance by designing and refining SQL queries, implementing caching strategies, and utilizing triggers, log tables, and audit tables to improve efficiency and scalability.
- Involved in the team of database architecture and made crucial decisions while developing complex database project schemas.
- Developed and mentored web applications development projects using, php, and AWS services, focusing on cloud-based architecture to enhance deployment and system performance.
- Built end-to-end software solutions for property management and affordable housing, including rental subsidies, rent calculations, ledger management, and payment processing features, ensuring compliance with housing regulations.
- Led the development and deployment of a microservices architecture using Docker , achieving a 50% improvement in system scalability and a 30% reduction in deployment time.
- Led the bug monitoring, reduced the bug count, and maintained the bug count to less than 10 for up to 6 months.

- Managed financial functionalities, including HAP (Housing Assistance Payments) allocation, rent schedules, gross rent updates, tax credits, HUD (Housing and Urban Development) payments, subsidies, and income limits.
- Ensured compliance with federal and state regulations for housing subsidies and income restrictions.

Software Engineer, Entrata India (Db Xento Systems) – Pune, India
Oct 2018 – Dec 2022

- Assisted, Developed and deployed complex web designs for property management and rental solutions using PHP for backend and Multiple front-end technologies.
- Developed the php unit tests and helped the product to achieve the performance improvement.
- Improved application performance by optimizing SQL queries by learning query optimization techniques with collaboration of data architects and implementing indexing and database partitioning.
- Collaborated closely with cross-functional teams in an Agile environment, participating in Sprint planning, & daily standups.
- Done Peer code review and helped maintain the quality of the code.
- Improved the debugging techniques and attended to the most of the urgent bugs and resolved them for clients reducing system downtime by identifying and resolving critical issues resulting in receiving appreciation badges from the manager.

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

- Assisted in developing and maintaining full-stack applications using HTML,JavaScript, AJAX, jQuery, PHP, and PostgreSQL.
- Developed and deployed minor modules for the property management
- Participated in bug fixing, code debugging, and performance boosts.
- Gained hands-on experience in Web development,Agile methodologies, actively involved in Sprint planning, and daily standups.

Trainee, Entrata India – Pune, India
Jan 2017 – Jun 2017

- Acquired foundational skills in software development by learning key technologies such as PHP Concepts, Database technoques, and UI design and development.
- Worked closely with senior developers to understand Agile practices, participating in Sprint meetings and learning the fundamentals of version control using Git.
- Completed comprehensive training in object-oriented programming (OOP) principles and database management, laying the groundwork.

ORGANIZATION PROJECTS

Importing Income Limits and Module Development

- Processed 1.6 million records of HUD and Tax Credit income limits across five years by designing generic SQL scripts for importing and structuring data.
- Automated workflows for eligibility definition based on family size, income levels, and percentage thresholds.
- Technologies: PHP, Postgres SQL, PLSQL, GIT, Excel. **Residents' Sensitive Data Encryption**
- Encrypted 100% of resident data, including phone numbers and SSNs, across the entire database using Libsodium encryption.
- Updated over 50% of the product code to ensure encryption compliance during data insertion and retrieval.
- Technologies: PHP, Libsodium, Postgres SQL, PLSQL, GIT.

State-Wise Certification Document Development

- Created 56 state-specific certification documents with merge fields for affordable housing certifications.
- Integrated document storage and retrieval via AWS S3, enabling seamless client access.
- Technologies: PHP, Postgres SQL, AWS S3, Adobe Acrobat DC Pro, GIT. **Client Document Migration to AWS**

- Migrated thousands of client documents from server storage to AWS S3, resolving 90% space constraints on legacy systems.
- Conducted database data creation, physical document migration, and comprehensive UI testing.
- Technologies: PHP, Postgres SQL, AWS S3, GIT. **Service-Based Architecture Revamp**
- Converted 20% of product modules into a service-based architecture, ensuring scalability and efficient data sharing across products.
- Improved modularity and reduced interdependencies in the product logic.
- Technologies: PHP, Postgres SQL, AWS S3, GIT.

Database Architecture Overhaul for Client Documents

- Redesigned outdated document storage architecture, migrating hundreds of thousands of records to a modern structure.
- Provided post-deployment support for six months, stabilizing the ecosystem and resolving client-specific issues.
- Technologies: PHP, Postgres SQL, Lucidchart, Adobe Acrobat DC Pro, GIT. **Redesigning Income Limits Module**
- Applied deep learning frameworks and Python to automate data processing workflows, leveraging API calls and OpenAI models to replace manual Excel-based operations.
- Implemented a custom neural network architecture inspired by literature to optimize the transformation and validation of complex datasets.
- Demonstrated clear communication by articulating technical concepts and project outcomes to stakeholders.
- Technologies: Python, OpenAI, PyTorch, Pandas, Postgres SQL, GIT.

Microservices for Financial Operations

- Designed microservices to handle critical financial functionalities such as rent schedules, gross rent updates, and HUD-compliant tax credit calculations.
- Integrated these services into the main product to ensure compliance with state and federal regulations.

Debugging and Performance Optimization Tools

- Developed internal debugging tools to identify and resolve system bottlenecks, reducing debugging time by 40%.
- Improved application performance through SQL query optimization, reducing response times across high-traffic modules.

ACADEMIC PROJECTS

CrashClarity Project

- Analyzed traffic accident data using R to identify patterns and contributing factors.
- Applied statistical methods and visualization techniques for Machine Learning Predictive Modeling.
- Presented insights via an interactive website hosted on GitHub Pages, enhancing data accessibility and decision-making.
- Technologies: R-programming, Statistical methods, GIT.

EDUCATION

Master of Science in Data Analytics Engineering, *George Mason University – Virginia, USA* 2024 – 2025

GPA: 3.78

Bachelor of Technology in Computer Science and Engineering, *Sree Venkateshwara College of Engineering – Nellore, India* 2013 – 2017