

# VENKATESAN M

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## PROFESSIONAL SUMMARY

Results-oriented Full Stack Software Developer with 1+ years of experience in software development and medical analyzer integration. Skilled in Python, Django, React.js, MySQL, Hosting and cloud technologies with strong problem-solving abilities.

## TECHNICAL SKILLS

- **Frontend Development:** React.js (Redux, Hooks), HTML5, CSS3, JavaScript (ES6+).
- **Backend Development:** Python, Django Framework, Flask Framework, Java, Spring Boot, REST APIs.
- **Database:** MySQL, PyMySQL, Microsoft SQL Server (MSSql), MongoDB, Database Optimization.
- **Cloud & DevOps:** AWS (EC2, S3, RDS), GitHub, GitHub Actions (CI/CD), Docker, Linux Administration.
- **Medical Tech & Networking:** LIS Machine Interface, HL7/ASTM Prts, RS-232, TCP/IP, ERBA XL200, HLC, VIDAS.
- **Tools & Core Skills:** Git/GitHub, VS Code, SDLC, Agile Methodologies, Logical Troubleshooting.

## PROFESSIONAL EXPERIENCE

### Trainee – Full Stack Developer

Aug 2024 – Nov 2024

*Beasant Technologies*

- **Full Stack Development:** Developed web applications using **Python, Django, React.js, HTML, CSS, JavaScript, and MySQL**. Designed and implemented RESTful APIs with secure authentication and efficient data handling.
- **Project Development:** Built projects including a **Blog Application, E-commerce Website, and Banking System** with authentication and CRUD operations, ensuring scalability, security, and responsive user experience across platforms.
- **Frontend Development:** Designed responsive user interfaces and integrated REST APIs for seamless frontend-backend communication, improving performance, usability, accessibility, consistency, and overall user experience.
- **Database Management:** Implemented database models and optimized queries in **MySQL** for efficient data handling, ensuring data integrity, normalization, indexing, faster query execution, scalability, and reliable database performance.

### Full Stack Developer

Feb 2025 – March 2026

*Vesoftometric Solutions*

- **HIMS Architecture:** Spearheading the development of core components of the Hospital Information Management System using **Django and React.js**, focusing on scalable architecture, efficient data flow, and seamless integration across hospital operations with modular design and high system reliability ensuring maintainability and performance.
- **LIS Integration:** Engineered the LIS Machine Interface using **Python** (for CodeManagement and performance) to automate data transfer from medical analyzers to the hospital system. Successfully integrated **ERBA XL200, HLC, VIDAS, Mini VIDAS, H500, H360, and EC90** analyzers with robust error handling and validation.
- **Database Management:** Executed complex SQL queries for manual data operations and optimized database schemas in **MySQL** to handle high-volume patient records efficiently and reliably with improved performance.
- **Deployment and QA:** Deployed applications on (AWS EC2, RDS) and offline servers using IIS (Windows) and Nginx with Gunicorn (Linux), ensuring scalable and highly available environments. Implemented CI/CD pipelines with **GitHub Actions** and testing to ensure accurate data synchronization, improving delivery speed and reliability.

## KEY PROJECTS

### Hospital Information Management System (HIMS) – Full Stack Development :

- Contributed to development of a **Hospital Information Management System (HIMS)**, integrating modules like **Front Office, OPD Reception, Nurse Workbench, Doctor Workbench, Ward Management, and Cashier**.
- Implemented modules such as **Laboratory, Radiology, Therapy, Pharmacy, Blood Bank, CSSD, Inventory, Insurance, Finance, HR, Master Configuration, Doctor Payout**, and designed **Quality Indicators**.

### Laboratory Information System (LIS) Machine Interface Integration :

- Engineered and deployed a **LIS Machine Interface** enabling uni- and bi-directional communication between analyzers and the hospital system using **RS-232** and **TCP/IP**, with robust parsing and automation for accurate data transfer.
- Integrated analyzers including **ERBA XL200, HLC, VIDAS, Mini VIDAS, H500, H360, and EC90**, improving lab efficiency by automating result capture, reducing manual entry, and minimizing reporting errors.

### MySQL Load Balancer & Monitoring System :

- Developed a desktop application for **MySQL load balancing and monitoring**, featuring auto-restart, thread failure handling, dynamic connection scaling, idle connection termination, and real-time performance visualization.
- Implemented real-time status monitoring with graphical dashboards displaying CPU usage, active threads, and database connections, similar to performance monitoring tools, enabling proactive alerts and system performance optimization.

### Flask-Based Fast Printing Service for Dot Matrix Printers :

- Developed a local **Flask-based executable** to resolve slow web-to-dot matrix printing in pharmacy systems by handling print requests efficiently, enabling automatic queue management, faster printing, and improved reliability.
- Implemented a listener service that captures print requests and directly sends them to local dot matrix printers, significantly improving print speed, reliability, automation, reducing manual intervention errors, and overall system efficiency.

## EDUCATION

### Bachelor of Computer Science

2021 – 2024

Bharathidasan University (AVVM Sri Pushpam College, Thanjavur)