SARAVANA PRASATH

Software Developer

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PROFILE SUMMARY

Aspiring Software Developer   Proficient in Full-Stack Development

Strong foundation in Computer Science and Problem-Solving   *Skilled in Java, Python, and Web Technologies*

- **Core Skills:** Data Structures and Algorithms, Web Development (MERN, React, Django), Statistical Analysis, and Computational Mathematics
- **Technical Expertise:** Proficient in Java, Python, and JavaScript with hands-on experience in building scalable applications
- **Academic Excellence:** Master of Science in Computer Science (CGPA: 7.84 / 10.00)

HANDS-ON EXPERIENCE

VDart   Aug 2024 – Nov 2024

Full-Stack Software Developer intern   *Trichy,Tamilnadu*

- Developed and maintained an online test application using **React.js** for the frontend and **Django** for the backend, following the **MVT architecture** and optimizing database design with **Django ORM**.
- **Custom Quiz Form Creation:** Built responsive, dynamic forms for various question types (MCQ, true/false, fill-in-the-blank), incorporating validation and placeholders to enhance usability.
- **Backend Code Logic & Database Design:** Designed and implemented backend logic using Django with structured models to efficiently manage users, quizzes, and results. Optimized database queries using Django ORM.
- **Secure API Integration:** Developed and integrated **JWT-secured RESTful APIs** with **Axios**, enabling efficient data retrieval, submission, and role-based access control for students and administrators.
- **UI/UX Enhancements:** Improved UI aesthetics with **active styles, rounded elements, and a cohesive color palette**, ensuring a responsive and visually appealing design.
- **Error Handling & Token Management:** Established robust API error handling and secure token storage, ensuring a seamless authentication process for users.

PROJECTS

QUIZ Web Application | *React.js, Django, Django REST Framework, PostgreSQL, JWT*   Aug–Nov

- Developed an online test application with a well-structured database, dynamic quiz forms (MCQs, true/false, fill-in-the-blank), and a responsive UI/UX.
- Implemented **secure RESTful APIs** using Django REST Framework with **JWT authentication** for role-based access control.
- Optimized backend logic and database queries using **Django ORM**, ensuring efficient data handling and faster response times.

- Enhanced UI aesthetics with **React.js**, active styles, and smooth navigation for a seamless user experience.
- Designed robust error handling and authentication flow, improving security and usability in an agile development environment.

Train Ticket Reservation System | *Java, Collections, JDBC, MySQL, Console Application*   Jan–Apr

- Developed a **console-based train ticket reservation system** in Java using **OOP principles** such as Encapsulation, Inheritance, and Polymorphism.
- Utilized **Collections Framework** (`ArrayList`, `HashMap`, `LinkedList`) to manage train schedules and reservations efficiently.

- Implemented **Exception Handling** with try-catch blocks and custom exceptions for robust error handling.
- Integrated **JDBC** with **MySQL database** to store and retrieve reservations, optimizing queries using **PreparedStatements**.
- Implemented **Multithreading** to handle concurrent booking requests using `Thread` and `ExecutorService` for performance optimization.
- Designed an interactive command-line interface with **File Handling** (`FileReader`, `BufferedReader`, `Scanner`) for reading and writing reservation data.
- Optimized memory management and performance by leveraging **JVM internals** such as Garbage Collection and ClassLoader.

Mini Projects

Bicycle Rental System | *HTML, CSS, JavaScript, PHP, SQL (XAMPP)* Jun–Oct

- Developed a web-based bicycle rental system with a user-friendly interface and responsive design using **Bootstrap** and **JavaScript**.
- Implemented a **secure login and registration system** using PHP and MySQL for user authentication and role-based access.
- Designed a structured **MySQL database** to manage users, bicycles, rentals, and transactions efficiently.
- Enabled dynamic booking functionality with **real-time availability checks** and **automated pricing calculations**.
- Optimized database queries and implemented **server-side validation** to enhance security and prevent SQL injection.

Technical Skills

Languages: Java, JavaScript, Python, HTML, CSS, SQL (MySQL), NoSQL (MongoDB), PostgreSQL

Frontend Technologies: React.js, Redux, Tailwind CSS, Bootstrap

Backend Technologies: Core Java, Spring Boot, Microservices, REST API, Django, Flask, Express.js, Maven, JWT, Postman, MVC Architecture

Database: MySQL, MongoDB, PostgreSQL

Development Principles: - Clean Code, Design Patterns - Object-Oriented Programming (Encapsulation, Inheritance, Polymorphism) - Data Structures & Algorithms (Arrays, Linked Lists, Trees, Hash Tables, Sorting, Searching) - RESTful APIs (HTTP Methods, Status Codes)

Tools: Git, GitHub, Git Bash, Postman, IntelliJ, Eclipse, Figma, AWS, Docker, Kubernetes

Concepts: - Compilers, Operating Systems, Virtual Memory, Cache Memory - Encryption & Decryption, Computer Networks - Artificial Intelligence, Machine Learning, Neural Networks - API Development, Database Normalization, Agile Methodology, Cloud Computing

Familiar With: Data Structures and Algorithms, Dynamic Programming, Data analytics, AWS (EC2)

Education

Master of Science in Computer Science Aug 2022 – May 2024
St. Joseph's College (Bharathidasan University) *CGPA: 7.84*

Bachelor of Science in Computer Science Jun 2019 – May 2022
National College (Bharathidasan University) *CGPA: 7.00*