

# THIVVIKAN PREMASRI

Jaffna, Sri Lanka

[Email](#) | +94 76 589 3654 | [GitHub](#) | [Portfolio](#) | [LinkedIn](#)

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## SUMMARY

Early-career Software Engineer with experience building backend systems, CLI tools, and web applications using **Java, Python, C#, and SQL**. Strong foundation in **data structures and algorithms, debugging, object-oriented design, REST APIs, and database-driven systems**. Internship and teaching experience supporting students and teams in solving coding problems and building applications. Seeking roles where I can contribute to **backend development, test infrastructure, and scalable system design**.

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## TECHNICAL SKILLS

- **Languages:** Java, Python, C#, PHP, JavaScript
  - **Frameworks:** Spring Boot, ASP.NET MVC, react
  - **Databases:** MySQL, SQL Server
  - **Web:** HTML, CSS, JavaScript, react, spring boot
  - **Developer Tools:** Git, GitHub, IntelliJ IDEA, Visual Studio, PyCharm, Postman
  - **CS Foundations:** Data Structures & Algorithms, OOP, Design Patterns, SOLID principles, MVC
  - **Systems & Infrastructure:** REST APIs, basic CI/CD, version control, Linux basics
  - **Testing:** JUnit, manual testing, debugging, code reviews
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## INTERNSHIP EXPERIENCE

### Java Developer Intern – Lanka Designs

Nov 2024 – May 2025 | Jaffna, Sri Lanka

- Developed backend modules in **Java** following **OOP and layered architecture**, improving code reusability by **~30%**
  - Implemented **CRUD operations** with MySQL, reducing data entry errors by **20%**
  - Debugged and resolved **15+ reported defects**, improving stability and user experience
  - Wrote and reviewed **pull requests** using GitHub, collaborating in a team of **4 developers**
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## PROJECTS (HIGHLY RELEVANT)

### StarEvents – Online Event Ticketing System

ASP.NET MVC | C# | MySQL

- Built ticketing platform supporting **multiple user roles (admin, organizer, customer, receptionist)**
  - Implemented **secure authentication** and **ticket purchase workflow** for users.
  - Designed normalized **SQL schema** improving query performance.
  - Added ticket validation module reducing duplicate entries to **0**.
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### Zyroute – Advanced Bus Reservation System

Java | PHP | PostgreSQL | react + vite

- Implemented **real-time seat reservation** and schedule management
  - Designed **role-based access control** for admins, bus owners, drivers, conductors, customers and guardians.
  - Built backend database of **500+ sample bookings** to test reliability
  - Reduced booking conflicts using transaction-safe SQL operations
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### RocketToMarsGame – AI-Powered Multi-Level Unity Game

Unity | C# | NavMesh | FSM | JSON | Game AI

- Developed a 3-level Unity game featuring **AI-driven navigation, combat, and puzzle solving**
  - Implemented **NavMesh pathfinding** with autonomous obstacle avoidance and dynamic route planning
  - Built **enemy perception and decision system** to detect closest target, rotate, and fire based on range and cooldown
  - Designed **FSM-based agent control** (Idle, MovingToOrb, MovingToReceiver, MovingToWall)
  - Implemented **learning chatbot** with intent recognition and JSON persistence
  - Built **color-matching puzzle system** with environment perception and validation logic
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### Sales Data Analysis CLI System

Python | Pandas | NumPy | Matplotlib

- Automated Excel sales analysis reducing manual effort by **2–3 hours per report**.
- Processed **1,000+ sales records** to generate branch/product performance summaries.

- Generated CLI-based dashboards and visualizations for decision-making.
  - Added data-cleaning steps reducing invalid records.
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## Bus Reservation System – CLI (Java)

### Java | File Handling | Custom Data Structures

- Built CLI reservation system using **queues, lists, and arrays**.
  - Implemented **waiting list + seat allocation algorithm**, increasing seat usage efficiency.
  - Added admin features for route and passenger management.
  - Practiced file-based persistence handling **hundreds of records**.
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## TEACHING EXPERIENCE

### IT Instructor (Part-Time) – ESOF Metro Campus

Feb 2025 – Dec 2025 | Jaffna, Sri Lanka

- Taught **DSA, OOP, Java, Python, and C#** to **100+ students** across multiple batches.
  - Conducted **hands-on coding labs**, improving average lab assessment scores.
  - Guided students through debugging projects and **Big-O complexity analysis**.
  - Mentored **mini-projects** and evaluated assignments for **code quality and design principles**.
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## DATA STRUCTURES & ALGORITHMS (DSA)

- Arrays, Linked Lists, Stacks, Queues and Trees & Graph basics
  - Searching & Sorting
  - Recursion and Dynamic Programming basics
  - Time and Space Complexity (Big-O)
  - Solved coding problems using **Java & Python**
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## EDUCATION

### BEng (Hons) Software Engineering

London Metropolitan University

Feb 2025 – Jan 2026(Expected)

## **Higher National Diploma in Software Engineering**

ESOFT Metro Campus

July 2023 – Feb 2025

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### **CERTIFICATIONS**

**Meta** – Introduction to Back-End Development

**IBM** – Python 101 for Data Science

**IBM** – Data Analysis with Python

**Sololearn** – Introduction to Java

**HackerRank** – Java (Basic)