

ABHINANDAN

+91 9140774849 | abhinandanx538@gmail.com | [LinkedIn: abhinandanx](#) | [GitHub: Abhinandan-KP](#) | [Portfolio: abhinandanx.vercel.app](#)

EDUCATION

SRM Institute of Science & Technology

Bachelor of Technology in Computer Science & Engineering

CGPA: 9.05/10.0

Chennai, India

Expected 2028

- **Relevant Coursework:** Data Structures & Algorithms (DSA), Object-Oriented Programming (Java/C++), Database Management Systems (DBMS), Operating Systems, Discrete Mathematics.
- **Honors:** NPTEL "Elite" Certification in Java Programming (Top 5%) & OOP.

TECHNICAL SKILLS

- **Languages:** C++, Java, Python, JavaScript (ES6+), SQL.
- **Core Competencies:** Data Structures & Algorithms (300+ pattern problems solved), Object-Oriented Design (OOP).
- **Web Technologies:** React.js, Node.js, Express.js, Tailwind CSS, HTML5/CSS3.
- **Tools & Platforms:** Git, GitHub, Vercel, VS Code, Linux, MySQL.

EXPERIENCE

DigiSys InnoSol Pvt Ltd

Software Engineering Intern

Remote / Hybrid

Aug 2025 – Present

- Collaborated with the engineering team to optimize internal workflows and execute basic software maintenance tasks.
- Reviewed and refactored legacy code documentation to align with real-world software structural standards.
- Executed comprehensive testing protocols and reported critical bugs to senior developers, gaining hands-on exposure to the full Software Development Lifecycle (SDLC).

PROJECTS

UPI Playground (Developer Tool) | React, JavaScript, Vite, Tailwind

[Live Demo ↗](#)

- Architected a specialized developer tool to simulate **NPCI UPI deep-linking protocols**, allowing developers to debug payment parameters ('pa', 'pn') and mobile intent flows in real-time.
- Implemented strict **Input Validation** to ensure accuracy for generated transaction strings, significantly reducing integration errors for fintech testing.
- Designed a responsive, accessible UI using **shadcn/ui**, featuring instant QR code generation and decimal precision logic.

3D Satellite Orbit Visualizer | Python, Pandas, Plotly

[Live Demo ↗](#)

- Developed a scientific visualization engine that converts raw **CSV coordinate data** into interactive 3D spherical trajectories.
- Engineered a **Spherical-to-Cartesian transformation pipeline** (x, y, z) to map satellite latitude/longitude data accurately onto a rotating Earth model using Vector Math.
- Deployed a serverless **Python backend** on Vercel, optimizing data processing to render complex orbital paths with **<100ms latency**.

Dijkstra & BFS Algorithm Visualizer | React, JavaScript, Algorithms

[Live Demo ↗](#)

- Built an interactive educational tool to visualize **Graph Traversal algorithms**, effectively demonstrating the time-complexity differences between Weighted (Dijkstra) and Unweighted (BFS) searches.
- Optimized the Javascript event loop to handle complex grid state updates without UI freezing, visualizing the "frontier expansion" step-by-step.
- Modeled graph nodes using **Structured Objects**, ensuring memory-efficient path tracking and wall generation logic.

CERTIFICATIONS

- **Elite Certification in Java Programming** | NPTEL (IIT Kharagpur) Top 5% (Score: 80%)
- **Elite Certification in Fundamentals of OOP** | NPTEL (IIT Roorkee) Score: 76%
- **Mastering Data Structures & Algorithms** | Udemy (Abdul Bari) 76-Hour Bootcamp
- **Full-Stack Development (React, Node.js)** | Anton Voroniuk
- **Mastering MySQL Database Management** | Maria EduCare

ACHIEVEMENTS

- **Redbull Basement Festival:** Selected to prototype innovative tech solutions in a global "Festival of Ideas" hackathon (Cherry+ Network).
- **Ideathon 2.0:** Competed in a university-level challenge focused on the social implications of technology (IEEE SSIT).
- **Student Member:** Indian Society for Technical Education (ISTE) [2025-2029].