

# Avinash Saroj

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📍 Pratapgarh, Uttar Pradesh

☎ 9044587898

🔗 Portfolio

## Technical Skills

**Programming Languages** — C, Java, JavaScript (ES6+), Python, TypeScript

**Databases** — MySQL, MongoDB

**Web Development** — HTML5, CSS3, SASS, Bootstrap, React.js, Next.js, Redux, TailwindCSS

**Backend Technologies** — Node.js, Express.js, RESTful APIs, GraphQL, WebSockets, JWT, OAuth, Passport.js

**DevOps & Tools** — Git, GitHub, Docker, Jenkins, CI/CD, Kubernetes, Vercel, Heroku, AWS (EC2, S3, Lambda)

**Testing & Debugging** — Jest, Mocha, Chai, Postman, Selenium

**Version Control** — Git, GitHub, GitLab, Bitbucket

## Academic Qualification

**B-Tech (Computer Science Engineering), IIIT Sricity** ☑ 2020 – 2024 | Chittoor, Andhra Pradesh

**Relevant Coursework:** Data Structures and Algorithms, Operating Systems, Database Management, Software Engineering, Artificial Intelligence

**12th Grade, Maharshi Patanjali Vidya Mandir (M.P.V.M) Ganga Gurukulam** 2019 | Prayagraj, Uttar Pradesh

**10th Grade, Swami Janki Sharan (S.J.S.) Public School** 2017 | Amethi, Uttar Pradesh

## Projects

**Finance Mate, Technologies:** React.js | Node.js | MongoDB | JWT | REST API | Axios | CORS | Material UI | AWS Lambda ☑

- Built a dynamic personal finance tracking application that provides real-time tracking of expenses, financial planning, and smart budgeting insights.
- Used **MongoDB** for transaction data storage with **Mongoose** for schema management and **aggregation pipelines** for advanced reporting.
- Deployed via **Vercel** (frontend) and **AWS Lambda** (backend) for a scalable serverless architecture.
- Achieved a **30% faster API response time** by implementing asynchronous functions and optimizing database queries.

**Metro Path Finder, Technologies:** Dijkstra's Algorithm | React.js | Node.js | GraphQL | Hash Maps | BFS/DFS | A\* Algorithm ☑

- Designed and implemented a real-time metro navigation system using **Dijkstra's** and **A\* algorithms** to calculate the shortest path between stations.
- Optimized the app for performance using **graph traversal algorithms** and reduced computation time by **20%** with efficient memory handling.
- Utilized **GraphQL** for dynamic data fetching and ensured high performance and responsiveness with **priority queues** and **binary search trees** for faster lookups.

**AlgoVision : Sorting Algorithm Visualizer,**

**Technologies:** JavaScript | HTML | CSS | React.js | Animation | Sorting Algorithms (Quick, Merge, Bubble) ☑

- Developed an interactive web application to visualize various sorting algorithms, enhancing user understanding of algorithmic efficiency and behavior.
- Implemented dynamic animations to illustrate the step-by-step process of sorting, improving engagement and educational value.
- Optimized rendering performance, ensuring smooth transitions and minimal lag during sorting operations.

## Activities and Leadership

**IOTA Club, IIIT Sricity, Core Member** 2022/08 – present

- Led and organized **hackathons** and technical workshops with over **500+ participants**, promoting innovation in the tech community.
- Fostered collaboration by mentoring students in developing projects, resulting in **20+ successful prototypes**.

**ENIGMA (Cyber Security Club), IIIT Sricity, Core Member** 2021/07 – 2022/12

- Coordinated a **Capture The Flag (CTF) event** with **80+ participants**, enhancing hands-on learning in cybersecurity.
- Conducted **educational sessions** on ethical hacking and network security, impacting over **200 juniors**.