Vignesh Sivakumar

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Objective

Full Stack Developer skilled in modern web technologies, building responsive and scalable applications with secure authentication and clean architecture. Passionate about problem solving, open-source contributions, and following industry best practices.

Education

Bannari Amman Institute of Technology, BE in Computer Science and Engineering   Sept 2023 – July 2027

- CGPA: 7.4/10.0
- Relevant Coursework: Data Structures, Computer Networks, Operating Systems, Database Management Systems

Projects

Portfolio Website   GitHub

- Built a responsive portfolio UI using **React.js** with reusable components to showcase projects and skills.
- **Deployed the application on Vercel** and improved UI performance through optimized asset loading and styling practices.

Classless – Inclusive AI Tutor for All   GitHub

- Built a user-facing learning platform UI using **React** and **React Native** with multilingual support.
- Integrated AI tutoring using Hugging Face and OpenAI; optimized UI flows for low bandwidth environments.
- Built **RESTful backend APIs** using **Node.js and Express.js**; debugged UI issues for smoother user experience.
- Verified API responses and integration flows using **Postman** and documented components for clean and maintainable code.

Pathfinding Algorithm Visualizer   GitHub

- Built an interactive UI-heavy web application using **React.js** and **TypeScript** with real-time animations.
- Implemented play/pause/rewind controls and timeline scrubbing for smooth UI interactions.
- Added analytics such as visited nodes, execution time, and path length to evaluate algorithm performance.
- Handled edge cases (no-path scenarios, invalid grid states) and improved performance for large grids.
- Tech Stack: React.js, TypeScript, Tailwind CSS, Vite, Shadcn UI, Recharts.

Open Source Contribution   GitHub

- Contributed documentation improvement to **Apache Arrow-RS** by updating Parquet async example usage in ArrowReaderBuilder docs (PR #9167).
- Collaborated with maintainers through PR review workflow and successfully merged changes into the main branch.

Technical Skills

- Languages: C, Java, JavaScript, TypeScript
- Frontend: React.js, HTML5, CSS3, Tailwind CSS
- Backend: Node.js, Express.js, REST APIs, Middleware
- Databases: MySQL, PostgreSQL
- Tools: Git, GitHub, GitHub Actions, Postman, Figma, Jira/Trello