

Vinay Shetye

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Education

University of Massachusetts. Dartmouth, Massachusetts

Sept. 2023 – May. 2025

Master of Science in Computer Science; GPA: 3.60/4.00

Shree Rayeshwar Institute Of Engineering & IT. GA, India

Aug. 2015 – May. 2019

Bachelor of Engineering in Computer Engineering; GPAA: 3.70/4.00

Coursework: Data Structures & Algorithms, Object-Oriented Programming & Design, Object Oriented Software Engineering, Web Technologies, Operating Systems, Database Management, Database Design, Formal Methods of Software Engineering, Algorithms & Complexity, Paradigmatic Software Development, Artificial Intelligence, Advanced Machine Learning, Advanced Computer Systems

Technical Skills

Languages: Java, Python, C/C++, JavaScript (ES6+), TypeScript, HTML5, CSS3, PHP, SQL (PostgreSQL)

Frameworks: React, Next.js, Node.js, Express, Django, Spring Boot, Redux, Tailwind CSS, Shadcn/UI, Material-UI

Databases: MongoDB, PostgreSQL, Oracle DB, MySQL

Developer Tools: Git, Docker, AWS, Google Cloud Platform, VS Code, IntelliJ IDEA, Postman, Eclipse

Libraries: NumPy, Pandas, D3.js, Lodash, Axios

WORK Experience

Teaching Assistant & Grader - University of Massachusetts. Dartmouth, Massachusetts

Sept. 2024 – Dec. 2024

(Part Time)

- Redesigned CIS461 curriculum materials and assessments, aligning content with industry best practices in formal methods.
- Mentored 50+ students through office hours and tailored academic support, leading to a 25% improvement in average assignment scores.
- Assessed over 100 submissions with detailed, rubric-based feedback, accelerating learning outcomes by 20%.
- Collaborated with faculty to iterate and enhance learning modules based on data-driven insights and student performance trends.

Software Engineer - WebMinds IT Solution. Pune, MH, India

Feb. 2021 – Aug. 2023

(Full Time)

- Engineered scalable full-stack applications using the MERN stack and PostgreSQL, driving a 30% boost in system throughput.
- Migrated monolithic platforms to microservices architecture, reducing load latency by 37% and enhancing modularity.
- Launched a React-based PWA with offline capabilities, increasing mobile retention rates by 40%.
- Implemented front-end optimization techniques using Webpack and DevTools, cutting initial page load by 45%.
- Partnered with clients and product teams to ship business-aligned features, elevating user satisfaction by 35%.

System Engineer - Tata Consultancy Services Ltd. Pune, MH, India

Jan. 2020 – Jan. 2021

(Full Time)

- Delivered enterprise-grade applications using Spring MVC, Hibernate, and Java, improving data throughput by 25%.
- Integrated comprehensive testing workflows using JUnit, reducing production bugs by 30%.
- Reduced unplanned outages by 40% through proactive infrastructure patching and performance diagnostics.
- Executed weekend infrastructure upgrades, including SAN patching and server optimization, ensuring system resilience.

Frontend Developer - Webware.ai. Ribandar, GA, India

Sep. 2019 – Nov. 2019

(Full Time)

- Built performant, responsive UIs using HTML5, Tailwind, and Material-UI, decreasing bounce rates by 30%.
- Diagnosed and resolved UI bottlenecks using DevTools and Spectacle, reducing rendering time by 25%.
- Accelerated asset loading via Webpack modularization, improving overall UX and frontend reliability.
- Developed automated scraping utilities to back up code repositories, slashing recovery time by 35%.

Software Engineering Intern - Infosys Limited. Shiroda, GA, India

Jan. 2018 – Jun. 2018

(Part Time)

- Programmed a GUI-based word scramble game using Python and Tkinter for an academic gamification initiative.
- Boosted logic efficiency by 25% using optimized list comprehensions and refactored looping structures.
- Refined UI responsiveness and modularity through iterative design improvements and memory optimization.

Projects Experience

Mass Shootings in USA 2014 – 2022 - Next.js, D3.js, Plotly, Python, Google Maps API, Tailwind CSS [Live Demo](#)

- Developed a geospatial analytics dashboard with dynamic filtering, achieving a 35% increase in data exploration.
- Built choropleth, heatmap, and network visualizations using D3.js and Plotly, enhancing user insights by 45%.
- Automated data ETL and geocoding pipelines in Python, reducing preprocessing time by 60%.

Flight Delay Insurance System - Next.js, TypeScript, Shadcn/UI, Prisma, PostgreSQL, Amadeus API [Live Demo](#)

- Built a full-stack flight insurance platform with real-time Amadeus integration, reducing churn by 40%.
- Integrated Stripe and NextAuth.js for secure multi-currency transactions and SSO, increasing conversion rates.
- Designed scalable data models in Prisma, streamlining booking logic and improving backend performance.

Google Keep Clone - React.js, Material UI, React Hooks, Masonry Grid, CSS3 [Live Demo](#)

- Developed a dynamic note-taking platform with CRUD operations and adaptive UI using Masonry Grid.
- Enabled persistent data storage, ensuring offline access and seamless user experience.
- Enhanced component modularity using React Hooks and Material UI for future scalability.

Word Scramble Game - React, TypeScript, Framer Motion, PurgoMalum API, Perspective API [Live Demo](#)

- Engineered a multilingual word puzzle game with classic/custom modes, file input, and leaderboard tracking.
- Applied PurgoMalum and Perspective APIs for profanity filtering and toxic content moderation.
- Delivered a rich UX with Framer Motion animations, responsive design, and immersive audio using Howler.js.

Extra-Curricular Activities

- Competed in UMass Dartmouth Engineering Hackathon (**US, 2024**).
- Contributed to local civic efforts including 9/11 Service, Fair Haven Beach Cleanup, and Tuesdays at Farm (**US, 2024**).
- Won 2nd place in Software Projecto Competition at Tech Twister (**India, 2019**).
- Earned podium finishes at state-level chess tournaments (**India, 2016**).
- Represented Goa at National School Games Chess Championships (**India, 2010 & 2011**).