ANJAN MANDAL

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EDUCATION

University of Louisiana at Monroe, Monroe, LA
Bachelor of Science in Computer Science (Honors Program) *Aug 2022 - May 2026*
GPA: 3.96

SKILLS

Technical Skills**:** C/C++, Java, Python, HTML, CSS, JavaScript, TypeScript, Express.js, React.js, Node.js, MySQL, MongoDB, AWS, ASP.NET, VB.NET, C#, Git, Angular, Bootstrap, PHP, Laravel, GraphQL, Tailwind CSS, Material UI, Django, Linux, Sequelize

EXPERIENCE

SquarePlanIT, Monroe, LA
Software Engineering Intern *Jul 2024 – May 2025*

- Resolved intermittent service status API failures in a high-traffic SaaS platform by diagnosing rate-limiting misconfigurations with API monitoring and log analysis, optimizing thresholds, and implementing dynamic API gateway scaling, reducing error rates by 30% and improving reliability by 40%.
- Established CI/CD pipelines using Jenkins to streamline build, testing, and deployment processes, cutting deployment failures by 25% and accelerating release times by 30%.
- Managed AWS services for 30+ clients, resolving scaling delays and outages with Docker containerization, Kubernetes on AWS EKS, and auto-scaling, achieving 99% uptime and cutting deployment times by 60%.
- Eliminated N+1 query bottlenecks in applications serving 2,000+ clients by implementing eager loading and batch fetching with Entity Framework Core, Sequelize, and Mongoose, resulting in a 70% performance improvement.
- Refactored Node.js applications to eliminate SQL injection vulnerabilities, enhancing data security by 75% through the implementation of ORM-based parameterized queries and strict input validation and enhancing authorization.

University of Louisiana at Monroe, Monroe, LA
Teaching Assistant and Emerging Scholar Program Recipient *Jan 2024 – May 2024*

- Increased student coding skills by 30% through regular LeetCode challenges in Java and Python and developed a visual application to demonstrate complex algorithms and data structures resulting in a 40% improvement in student grades.
- Selected from 300 ULM Computer Science students for the Emerging Scholar Program, presented AI research on neural networks and machine learning at a symposium, and awarded a stipend for outstanding contributions.

National Innovation Center, Kathmandu, Nepal
Software Engineering Intern *May 2022 – Dec 2022*

- Designed custom JWT and session-based authentication with passport.js to resolve session management and token validation vulnerabilities, boosting system security by 40% and optimizing authentication and compliance.
- Refactored and optimized legacy software built by a senior developer, employing NodeJS and Django to achieve a 30% performance increase and enhance security compliance with current best practices.
- Developed and deployed 10+ startup applications using React.js, Node.js, and Vue.js, boosting production capacity by 40% through faster development and improved code maintainability.

PROJECTS

MusiCure 2025

- Led a team to develop an AI-driven speech therapy and vocal coaching platform, integrating sound-to-sound AI, gamified learning, and adaptive dyslexia tools—achieving 80% higher accuracy than traditional methods and benefiting 100+ children in the first phase.
- Engineered a scalable AI pipeline using Node.js, TensorFlow, and PostgreSQL, improving vocal and speech feedback precision by 30% and reducing real-time analysis latency by 25% through deep learning models trained on diverse speech disorder datasets. Explore the platform here.

Help Hub 2024

- Engineered an AI-powered platform using Node.js, TensorFlow, and React to connect users with professionals, increasing service accessibility by 30% and reducing costs by 20% through AI-driven matchmaking, user-defined budgets, and a real-time auction system for efficient, high-quality service delivery.
- Facilitated job opportunities by generating 500+ professional engagements within six months, by connecting skilled individuals with clients through AI-driven matchmaking and real-time bidding, contributing to economic empowerment and professional growth. Explore the platform. Project link here.

Lost and Found 2024

- Secured runner-up position out of 20 teams in the ULM Hackathon by leading the development of a scalable full stack Lost and Found platform using Node.js, React, Material UI, MongoDB, and presenting it to an audience of 200.
- Designed and implemented a real-time notification system using socket.io, reducing response time for reported lost items by 50%, enabling users to receive instant updates, and enhancing overall platform efficiency—earning recognition and approval from industry professionals and professors. Visit the GitHub here.

Okay Journey *2022*

- Co-developed "Okay Journey," a mobile app and website for travel bookings and information, enhancing backend systems to improve transportation convenience in Nepal by 30% and ensuring real-time updates and price consistency. *Visit the app here.*