

SAINATH GANDHE

Fullerton, CA | 714-519-7072 | gandhe.sainath@csu.fullerton.edu | [LinkedIn](#) | [GitHub](#)

OVERVIEW

A passionate and highly adaptable software engineering student pursuing a Master's degree in Computer Science, with strong fundamentals in distributed systems, cloud computing, data structures, and algorithms. I am eager to contribute to large-scale, real-time systems by solving scalability bottlenecks, optimizing services, and deploying impactful features. I thrive in dynamic environments where collaboration and continuous learning are emphasized.

EDUCATION

Master of Science in Computer Science, California State University, Fullerton

Aug 2024 - Aug 2026

- GPA: **3.9/4.0**, Relevant Coursework: Artificial Intelligence, Database Management Systems, Algorithms, Advance Computer Networking.

Bachelor of Engineering in Computer Science, The National Institute of Engineering, Mysuru

Aug 2019 - Aug 2023

- GPA: **3.5/4.0**, Relevant Coursework: Operating Systems, Cloud Computing, Computer Networks, System Design, Software Engineering.

SKILLS

- Programming Languages:** Java, Python, C++, TypeScript, JavaScript, HTML5, CSS3, C#.
- Frameworks & Libraries:** React, .NET, Node.js, Express.js, Spring Boot, Angular, Flask.
- Database Management:** SQL, PostgreSQL, MongoDB.
- Software Development:** RESTful APIs, Object-Oriented Programming (OOP), Data Structures & Algorithms, Agile/Scrum Methodologies, Unit Testing, Test-Driven Development, API Development, Property-based Testing (QuickCheck, Hypothesis), Automated Testing.
- Cloud Platforms:** AWS (Lambda, EC2, S3), Azure.
- Tools:** Continuous Integration / Continuous Delivery (CI/CD), JIRA, Microsoft Office, Jenkins, Linux/Unix, Docker, Kubernetes, Git.
- Problem-Solving:** Analytical Thinking, Debugging, Code Optimization, Root Cause Analysis.
- Soft Skills:** Collaboration, Problem-Solving, Communication, Agile Methodologies.

EXPERIENCE

BOEING

Aug 2023 - Aug 2024

Software Developer

- Led the Critical Parts Tracking System (CPTS) project using SpringBoot for the back-end and Angular for the front-end, improving the real-time tracking of critical aerospace parts. By implementing robust data handling and real-time updates, this system improved reporting accuracy by **25%**, enabling seamless integration of updates across multiple operational units.
- Designed and implemented new features for CPTS, focusing on creating a user-friendly interface that allowed team members to access real-time data. Integrated data from diverse sources, such as inventory databases and supplier systems, which increased accessibility for the management team. This holistic approach not only improved system visibility but also facilitated informed decision-making.
- Conducted end-to-end testing for CPTS, validating the application's robustness and performance, and collaborating with the QA team to ensure that updates were deployed efficiently with minimal downtime, reducing errors by **30%**.
- Optimized the Wireless Business Management System (WBMS) using React for the front-end, addressing bottlenecks that caused delays in wireless business operations. This effort reduced system latency by **15%** and streamlined overall business workflows.
- Implemented real-time data synchronization features in WBMS, allowing business teams to monitor wireless systems efficiently. Created user-focused enhancements to provide clear data visualizations, improving team response times and operational decision-making.
- Actively participated in Agile Scrum ceremonies, including sprint planning and retrospectives, to ensure continuous delivery of value. Collaborated with cross-functional teams to integrate third-party tools and optimize the existing infrastructure for both CPTS and WBMS.

BLOCMATRIX IT SOLUTIONS

Feb 2023 - Jun 2023

Software Developer Intern

- Designed and implemented distributed storage and query systems using AWS Lambda and DynamoDB, ensuring high availability and fault tolerance, which resulted in a 25% increase in system reliability. Collaborated with cross-functional teams to establish scalable architectures.
- Built a scalable data pipeline leveraging Kubernetes, enabling real-time predictions and handling high-volume workloads efficiently. Optimized pipeline performance, leading to a 40% improvement in data processing speed.
- Developed an automated testing framework using Python, integrating property-based testing methodologies to identify and mitigate edge-case failures, increasing code coverage by 30%.
- Participated in Agile ceremonies, including sprint planning, stand-ups, and retrospectives, to drive team productivity and deliverables. Led retrospectives that refined processes, improving overall team performance by 15%.
- Enhanced cross-functional collaboration by designing and implementing RESTful APIs that enabled seamless communication across distributed microservices, improving system integration and reliability.

NULLCLASS

Oct 2022 - Dec 2022

Web Developer Intern

- Created a cloud-based travel booking platform using React and Node.js, offering real-time booking capabilities. This system improved user retention by 20% due to enhanced functionality and a streamlined user experience.
- Designed and implemented distributed indexing mechanisms for scalable data retrieval, reducing search response times by 35%, significantly enhancing platform responsiveness.
- Conducted formal verification of critical modules to ensure operational reliability. Applied automated testing frameworks to identify and resolve potential system faults, improving overall stability.
- Utilized property-based testing tools such as QuickCheck to identify edge-case failures, enabling robust software performance and ensuring consistency across deployments.

- Collaborated with UX teams to refine the user interface, increasing usability scores by 25% through iterative design and feedback loops with stakeholders.

DELOITTE

Aug 2022 - Sep 2022

Virtual Experience Intern

- Automated data analysis workflows using Python and advanced scripting, achieving a 15% improvement in processing speed. Streamlined financial reporting systems to enhance accuracy and efficiency.
- Designed and deployed a secure, distributed ledger system utilizing blockchain principles to ensure data integrity and reduce transaction errors.
- Engaged in theorem proving and symbolic execution methodologies for verifying the accuracy of complex financial models, improving system reliability and stakeholder confidence.
- Documented intricate processes and developed a comprehensive knowledge base for team-wide use, enhancing collaboration and continuity for ongoing projects.
- Participated in Agile project workflows, contributing to sprint reviews and planning to ensure timely delivery of high-quality solutions that aligned with business goals.

PROJECTS

Dynamic Web Application for Inventory Management

- Engineered a full-stack inventory management application using Node.js and React that streamlined inventory tracking processes for small businesses, improving operational efficiency by 25%.
- Designed and implemented a RESTful API for managing inventory data, allowing users to perform CRUD operations easily and access real time information.
- Integrated user authentication and role-based access control, enhancing application security and ensuring that sensitive information was adequately protected.
- Collaborated with stakeholders to define key requirements and features, ensuring the application met business needs and improved overall user satisfaction by 20%.
- Conducted extensive testing to ensure application reliability and performance, achieving a 99% uptime during initial deployment phases.

Personalized Recommendation Engine for E-Commerce

- Developed a recommendation engine using Python and collaborative filtering algorithms to deliver personalized user experiences. Integrated deep learning models for advanced predictive capabilities.
- Enhanced recommendation accuracy by 15% through the application of GenAI models, increasing customer satisfaction and engagement rates significantly.
- Designed a RESTful API to enable seamless integration with e-commerce platforms, streamlining backend workflows and improving developer efficiency.
- Deployed the system on AWS Lambda, achieving scalable and cost-effective processing for a growing user base. Optimized infrastructure costs by 25%.
- Conducted extensive A/B testing to refine algorithms based on user feedback, improving the relevance and accuracy of personalized recommendations.

Automated Code Analysis Tool

- Built a static code analysis tool using Python and abstract syntax trees, identifying vulnerabilities and ensuring adherence to best coding practices in distributed systems.
- Enhanced the tool's functionality with advanced type-checking features, reducing runtime errors by 40% and improving code reliability across teams.
- Developed a visualization dashboard using D3.js, providing real-time insights into code quality metrics and enabling informed decision-making for developers.
- Integrated the tool with Jenkins pipelines to automate code analysis during continuous integration, reducing manual effort and enhancing development workflows.
- Partnered with development teams to refine the tool's usability and adaptability, driving adoption and fostering a culture of proactive code quality management.

RESEARCH PUBLICATIONS

[Stock Price Prediction using Machine Learning – An Unprecedented Approach:](#)

- Machine Learning Focus: Applied LSTM and CNN to predict stock price movements, aiming to improve financial decision-making by forecasting stock trends based on historical data.
- Sequential Data Analysis: Utilized LSTM networks to handle the sequential nature of stock prices, effectively analysing intraday and interday trading patterns for better market predictions.
- External Factors Integration: Enhanced the model by incorporating external factors like economic indicators, improving prediction accuracy and helping investors make more profitable trades.
- Outcome: Demonstrated that machine learning models combined with external data can significantly improve stock price forecasting, offering practical insights for traders and investors. movements accurately.

[G – Notify – A Personalized Mass Emailer :](#)

- Mass Email Solution: Developed a scalable mass mailing system, G-Notify, enabling personalized content delivery to large audiences, optimizing email engagement through tailored messaging.
- Segmentation and Personalization: Leveraged segmentation to deliver targeted emails, increasing engagement rates by 40%, using dynamic content based on user behaviour and preferences.
- High-Volume Delivery: Ensured efficient, large-scale email delivery without compromising HTML structure or system performance, supporting personalized communication across diverse audiences.
- Affordable and Scalable: Designed for small to medium organizations, G-Notify provides a cost-effective, easy-to-implement solution for personalized mass communication.