

# Sidharth Agarwal

Software Engineer

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## Summary

Software Engineer with 2 years of experience building enterprise-grade systems across healthcare, automotive manufacturing, and government sectors. Proficient in React, Node.js, Python, and cloud platforms, with a strong track record of delivering scalable solutions — from ML-powered data pipelines processing 100K+ records to multi-tenant ERP systems serving Fortune 500 clients. Experienced in end-to-end product development with a focus on performance, security, and measurable business impact, having successfully collaborated with cross-functional teams across multiple time zones including Japan (JST) and Saudi Arabia (AST).

## Technologies

**Languages:** C++ (Data Structures and Algorithms), Python, JavaScript, SQL

**Frontend:** HTML, CSS, Tailwind, ShadCN, React, Redux

**Backend:** NodeJS, Express, Flask, REST APIs, JWT

**Databases:** MySQL, PostgreSQL, MongoDB, Firebase

## Experience

**Software Engineer**, ADA Digital Analytics Private Limited - Bengaluru, India

July 2024 - Present

### Client 1: Ascend Solutions, Riyadh

- Developed ML-powered data quality monitoring system processing 100K+ healthcare records, using Isolation Forest and statistical methods to identify 500+ data inconsistencies, improving data accuracy by 28% while maintaining HIPAA compliance
- Architected secure multi-tenant authentication system with JWT-based token management, granular RBAC permissions across 8+ user roles, OAuth 2.0 integration, and encrypted session storage, ensuring HIPAA compliance and data integrity across healthcare microservices
- Established comprehensive testing framework achieving 80% code coverage with automated CI/CD pipelines on Azure, enabling zero-downtime deployments for production healthcare systems

### Client 2: Mitsui, Japan

- Architected enterprise manufacturing management system for Fortune 500 automotive supply chain (Mitsui Steel, Perodua, Toyota Malaysia), managing multi-million dollar purchase orders and production workflows serving 500+ users across 25+ application routes
- Built advanced file processing engine handling 10,000+ row Excel/CSV files with merged cell detection, style preservation, and real-time HTML preview using ExcelJS and custom parsers, reducing manual data entry by 85%
- Developed production forecasting module with ML-based difference detection comparing previous vs latest production plans across 15+ vehicle models and production months, automatically identifying discrepancies for approval workflows
- Engineered complete delivery management system with vessel tracking, ETD/ETA monitoring, multi-document handling (B/L, invoices, packing lists), and O/S reconciliation workflows, reducing processing time by 60%
- Designed scalable React SPA with Redux state management, 15+ reusable components, Microsoft Entra ID authentication with auto-refresh tokens, and optimized API integration with Power Automate backend services

**SDE Intern**, Decathlon - Bengaluru, India

August 2023 - October 2023

- Led implementation of 10+ A/B tests using VWO, driving 25% increase in user engagement through data-driven UX improvements and statistical analysis
- Developed comprehensive technical documentation covering system architecture, API integrations, and component library
- Collaborated with UX team to optimize website performance, reducing load time by 30%

## Education

**Meerut Institute of Engineering and Technology** - September 2020 - June 2024

- B.Tech in Computer Science and Engineering (Artificial Intelligence and Machine Learning)
- Coursework:** Database Management System, Theory of Automata and Formal Language, Operating System, Computer Networks, Design and Analysis of Algorithm, Computer Architecture

## Professional Projects

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**Full Stack Developer**, Consulting Work

Aug 2023 - Present

- **Learning Management System** - *Educational Institution*

- Developed complete academic workflow management including student enrollment, timetable generation with conflict detection
- Built role-based access for Admin, Faculty, and Students with real-time attendance tracking and automated grade calculation
- Reduced administrative workload by 60% and improved data accuracy through centralized database with validation

- **Flextiles ERP System** - *Print Manufacturing Company*

- Created end-to-end ERP managing 15+ production processes (letterpress, foil stamping, embossing, die-cutting)
- Implemented dynamic billing with automated cost calculations, CRM pipeline, and production stage tracking
- Reduced estimate creation time from 2+ hours to 15 minutes with 80% accuracy improvement in pricing

## Certifications

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- **Data Engineer Certification** - Snowflake (2025)
- **SnowPro Core Certification** - Snowflake (2025)
- **Full Stack Web Development** - 100xDevs (2024)
- **Data Structures and Algorithms in C++** - Coding Ninjas (2022)
- **Foundation in C++** - Coding Ninjas (2021)