

ANADI AAKAR DEWAN

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Software Engineer with experience building and operating production systems across frontend and backend. Experienced in designing scalable distributed systems, event-driven architectures, and low-latency backend services running in Linux production environments. Strong foundations in data structures, algorithms, and distributed systems, with hands-on experience debugging, performance optimization, and owning services end-to-end.

EDUCATION

Arizona State University	Aug 2024 - May 2026
Master of Science in Software Engineering (GPA: 4.0)	Tempe, AZ
SRM Institute of Science and Technologies	Aug 2016 - May 2020
Bachelor of Technology in Computer Science	Chennai, India

EXPERIENCE

SMS Group	May 2025 - Aug 2025
Software Development Intern	Pittsburgh, PA

- Built and maintained production web applications and scalable backend services supporting real-time manufacturing workflows, focusing on scalability, reliability, and low-latency system behavior.
- Owned feature development end-to-end, from implementation through production deployment and monitoring.
- Acted as Designated Responsible Individual (DRI) during live deployments, triaging production issues, debugging root causes, and restoring service availability.
- Debugged production incidents in Linux environments and optimized frontend-backend interactions, improving UI responsiveness by 20-25% through API optimization and system-level performance tuning.
- Collaborated with product managers and stakeholders to iterate on features based on feedback and operational needs.

Revmax Technologies	Feb 2024 - Aug 2024
Software Developer	Delhi, India

- Designed fault-tolerant event-driven architectures using Kafka and Redis, enabling reliable asynchronous processing and scalable distributed system workflows, improving API response times by 30-40%.
- Built a real-time auction platform supporting concurrent bidding using Kafka for event streaming and Redis for fast state management, enabling low-latency bid propagation across services.
- Refactored monolithic query paths into modular components, accelerating feature delivery and improving maintainability.
- Designed scalable backend services and APIs with an event-driven architecture to decouple services and improve fault tolerance across distributed components.
- Worked extensively in Linux production environments debugging distributed services and monitoring system health.

AFOUR Technologies	Sep 2022 - Feb 2024
Software Development Engineer	Mumbai, India

- Developed backend services and data pipelines to process large datasets, focusing on efficient data access patterns, distributed system reliability, and performance optimization.
- Optimized query paths and data access patterns to improve response times and reduce system costs.
- Worked closely with cross-functional teams to translate business requirements into scalable technical solutions.

VVDN Technologies	July 2020 - Sep 2022
Software Engineer	Gurugram, India

- Built secure admin and user interfaces and real-time monitoring systems using RabbitMQ and WebSockets for device telemetry.
- Mentored junior engineers, improving code quality and debugging efficiency.

Teaching Experience - Arizona State University	Aug 2025 - Present
Intro to Programming (Scheme, Prolog), Computer Networks, Data Science (PG), Intro to Java	Tempe, AZ

- Mentored students in algorithms, debugging, and system reasoning across courses in programming, data science, and computer networks.

TECHNICAL SKILLS

Programming Languages: Python, Java, C#, JavaScript
Distributed Systems: Event-Driven Architecture, Asynchronous Processing
Messaging & Streaming: Kafka, Redis, RabbitMQ
Databases: PostgreSQL, Redis
Infrastructure: Docker, CI/CD, Linux, Cloud Systems (AWS/GCP basics)

GenAI Knowledge Assistant (Retrieval-Augmented Generation System)

Aug 2024 – Mar 2025

Personal Project

- Built a Retrieval-Augmented Generation (RAG) system enabling semantic search and question answering over multi-document corpora.
- Implemented document ingestion, chunking, embedding generation, vector indexing, and retrieval pipelines integrated with LLM inference.
- Designed scalable backend APIs using FastAPI to handle document uploads, retrieval queries, and contextual response generation.

Multimodal Job Posting Fraud Detection System (AI + Systems)

Aug 2025 - Dec 2025

Personal Project

- Designed and implemented an end-to-end multimodal ML system combining text, image, and metadata pipelines with modular model components.
- Built scalable preprocessing and inference pipelines to handle missing or partial inputs while maintaining system robustness.
- Achieved ROC-AUC 0.99 through conditional fusion, and implemented explainability tooling (SHAP, Grad-CAM) to support debugging and model validation.
- Focused on system reliability, debuggability, and maintainable code structure rather than model performance alone.