

Akash Agrawal

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PROFESSIONAL EXPERIENCE

Software Engineer - AI

Feb 2026 - present

NewsGenie, Inc.

Mesa, AZ

- Blocked 96/100 bots from scraping publisher content via a real-time protection service with sub-second access revocation, using FastAPI, React, MongoDB, Redis, and AWS KMS.
- Built 34 AI courses (280+ hours of content) via a multi-agent pipeline spanning content generation, slide creation, narrated audio, and video assembly, using LangChain and multi-LLM orchestration.
- Flagged pre-publication legal risks across 6 countries via a knowledge graph (Neo4j) with semantic retrieval (PostgreSQL, pgvector), using FastAPI and Streamlit.

AI Engineer

Aug 2024 - Jul 2025

Arizona State University

Tempe, AZ

- Cut data analysis time 95% (40hr to 2hr per cycle) via a deep learning pipeline on AWS Lambda and S3.
- Processed 3,500+ entities at 0.82 mAP via a multi-object tracking system using FairMOT and YOLOv8.
- Cut environment setup time 90% and eliminated config drift via standardized Docker and Terraform deployments.
- Ensured 99.9% uptime and faster incident resolution via system observability built with AWS CloudWatch.

Software Engineer

Jan 2023 - Nov 2023

LTIMindtree (Client: Citi Bank)

Remote

- Automated config management for financial systems via secure, scalable middleware, using Node.js and Angular.
- Accelerated data processing 35% via Oracle PL/SQL optimization and RESTful API integration.
- Hardened application security via SSO, RBAC, and full audit logging across sensitive financial data.
- Enforced code quality on an end-to-end CI/CD pipeline using Jenkins, Docker, Kubernetes, and SonarQube.

Software Engineer - Data

Aug 2021 - Dec 2022

LTIMindtree (Client: Avery Dennison)

Remote

- Consolidated 10M global customer records into a unified CRM via an enterprise MDM pipeline using Informatica (ETL).
- Boosted legacy pipeline efficiency 30% via data enrichment using Python, Oracle PL/SQL, and REST APIs.
- Improved governance metrics 4x via automated validation testing and deduplication logic.
- Enabled AI-driven analytics across Oracle CRM/CX by delivering 2.5M golden customer records downstream.

PROJECTS

NL2SQL AI Agent

Summer 2025

Python, RAG, HuggingFace, LangChain, LLM, ChromaDB, SQLite, PostgreSQL

- Cut client query resolution time from 3 days to under 1hr via a natural language interface to a relational database.
- Built fault tolerance via a reflection-based AI agent with 3 retry loops, using LangGraph, LangChain, and RAG.
- Reduced hallucinations 60% and achieved 0.71 retrieval precision via RAGAS evaluation and prompt engineering.

LambdaLens

Fall 2024

AWS Lambda, OpenCV, Docker, FFmpeg, ResNet-34, MongoDB

- Processed concurrent media streams in real time via a scalable event-driven video analysis pipeline on AWS Lambda.
- Cut cloud costs 50% via optimized Docker builds, with observability through standardized CloudWatch logs.
- Achieved 90%+ inference accuracy on unseen video data via ResNet-34 integrated within a serverless environment.

ACHIEVEMENTS

- Ranked 239th internationally out of 10,000 teams in the ICPC 2019.
- Awarded 'Super Crew' honor by LTIMindtree for technical excellence and collaboration.
- Active member of SoDA, HackerDevils, GDSC at ASU, and the GitHub open-source community.

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, Java, SQL, C#, C/C++, Bash

Frameworks: FastAPI, React, Node.js, Next.js, GraphQL, RESTful API, Spring Boot, .NET, Angular, Streamlit

Cloud & DevOps: AWS (Lambda, S3, KMS, CloudWatch), Docker, Kubernetes, Terraform, Jenkins, GitHub, JIRA

AI Tools: Cursor, Claude, Codex

Databases: MySQL, PostgreSQL, Oracle DB, SQLite, MongoDB, Redis, ChromaDB, pgvector, Neo4j

EDUCATION

M.S. Computer Science | Arizona State University, Tempe, AZ

Dec 2025

Courses: Statistical Machine Learning, Cloud Computing, Data Processing at Scale, Software Security, Semantic Web Mining

B.S. Computer Science | Nagpur University, IN

Jul 2021