

ASHAY KARGAONKAR

Backend Software Engineer | Machine Learning Engineer | Cloud & API Specialist

PROFESSIONAL SUMMARY

Software Engineer with 4+ years of experience, including 3+ years in backend development using .NET, AWS, and database systems like DynamoDB and SQL. Experienced in building scalable REST APIs, microservices, and cloud-native applications. Skilled in TypeScript, React, and Python, with a strong understanding of CI/CD, unit testing, and distributed systems. Proficient in data science and machine learning, with hands-on experience using TensorFlow, YOLO, AWS SageMaker, and CNNs for image processing, classification, and building AI-driven automation workflows.

EMPLOYMENT HISTORY

SOFTWARE ENGINEER

Mar 2022 - Jun 2025

Tata Consultancy Services

Chicago, IL

- ♦ Modernized legacy .NET systems by upgrading frameworks, refactoring backend logic using MVC, and migrating to DynamoDB, resulting in improved system performance and reduced maintenance.
- ♦ Designed and deployed scalable RESTful APIs using C# on AWS, created frontend components with React.js, and architected the overall system including database design, Lambda functions, and table backups.
- ♦ Built and maintained CI/CD pipelines using Harness, GitHub, and Docker; created Postman collections for testers, implemented unit testing for APIs, and worked in close coordination with QA to resolve bugs quickly and deliver features on time within Agile workflows.

DATA ANALYST INTERN

Jan 2021 - Mar 2021

Instahub LLC

Remote

- ♦ Analyzed AWS RDS sensor data with MySQL to identify patterns in room and device usage, uncovering key insights for operational optimization and electricity conservation.
- ♦ Developed predictive models in R and Python to improve energy efficiency, leveraging statistical analysis and data visualization (matplotlib, Tableau) to uncover usage trends and support strategic decisions, while designing dashboards for monitoring.

DATA SCIENTIST

Aug 2018 - Aug 2019

Ezeelo Consumer Service PVT LTD

Nagpur, India

- ♦ Analyzed customer data using SQL and Python to predict inventory needs and optimize global distribution through clustering and predictive algorithms. Developed product recommendation models that led to an 18% increase in sales.
- ♦ Designed interactive Tableau dashboards to visualize product demand and highlight emerging trends, enabling faster and more informed business decisions.

PROJECTS

THINKMOVES (ONGOING)

- ♦ Built ThinkMoves – an AI-powered chess analysis platform that converts scanned scoresheets into accurate PGNs. Developed a .NET (C#) backend with custom logic for metadata extraction, move validation, and PGN generation, integrated with Azure OCR, TrOCR, ResNet, YOLO, and TensorFlow for image processing, handwriting recognition, and layout classification. Used Postman for API testing and debugging.
- ♦ Designed a responsive frontend using Next.js and React for file uploads, user review, and PGN display. Deployed via Vercel (frontend) and AWS App Runner (backend), with AWS services like S3, Lambda, Cognito, and DynamoDB powering authentication, storage, and processing workflows.

ASHAY'S PORTFOLIO

A vibe-coded portfolio built with Next.js, TypeScript, React, and WindSurf, deployed on Vercel. Designed for recruiters and visitors to explore my work, connect, and interact via an AI chatbot. Regularly updated with new projects and features.

EDUCATION

MASTER OF SCIENCE IN COMPUTER SCIENCE

Sep 2019 - Aug 2021

DePaul University

Chicago, IL

BACHELOR OF COMPUTER ENGINEERING

Jun 2013 - Jun 2018

Pune University

Pune, India