

Om Rajesh Pawar

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SUMMARY

AWS Certified Solutions Architect and MSc AI student at University of Birmingham Dubai with the proven ability to bridge the gap between advanced machine learning and robust, scalable cloud infrastructure. Having hands-on experience designing and deploying end-to-end solutions, from architecting a serverless global content delivery platform that minimized latency and ensured business continuity, to developing a full-stack AI application for real-time pose estimation and a profitable reinforcement learning trading bot. Interested in applying a systematic, data-driven approach to solve complex challenges, leveraging expertise in AI / ML and cloud computing to build efficient, intelligent, and resilient systems.

EDUCATION

University of Birmingham Dubai

MSc Artificial Intelligence (AI) and Machine Learning

Dubai, UAE

September 2025 – Present

PVG's College of Engineering and Technology Pune, SPPU

Bachelor of Artificial Intelligence & Data Science - CGPA: 8.77

Pune, India

June 2021 – June 2025

EXPERIENCE

Verve Global Services, Pune — Cloud Engineering Intern |

June 2025 – August 2025

AWS (CloudFront, S3, Lambda, DynamoDB, ElastiCache, Route 53, Cognito, Secrets Manager), Serverless Architecture, Infrastructure as Code (IaC), Disaster Recovery Planning

- Managed the end-to-end program to improve global content delivery performance for a CDN platform, increasing throughput and minimizing latency by architecting a scalable, serverless AWS solution.
- Implemented a multi-layered caching strategy utilizing CloudFront Edge locations, Origin Shield, and ElastiCache for Redis to minimize latency, reduce load on origin servers, and significantly lower data transfer costs.
- Owned the business continuity program by designing and implementing a Pilot Light Disaster Recovery strategy, mitigating risk and safeguarding service availability during potential regional failures.
- Defined a monitoring framework to track key operational metrics in CloudWatch, including customer-centric indicators like Rebuffering Ratio, performance metrics like CloudFront Cache-Hit Ratio, and critical cost drivers such as Daily Data Transfer Out to enable data-driven decision-making and continuous service improvement.
- Developed comprehensive test case reports to optimize and fine-tune the production environment for enhanced performance and reliability.

AI & DS Department, PVG's COET & GKPIOM, Pune — AI Intern |

January 2025 – March 2025

Python, OpenCV, Mediapipe, Tensorflow, Llama3, React, NodeJS, Flask

- Led the development of a personalized training system by integrating advanced ML models (Mediapipe, Llama3) into a full-stack application for real-time user pose estimation and feedback.
- Implemented a live skeletal overlay system providing color-coded posture feedback, boosting user retention.
- Created an accurate dataset of 30 unique yoga postures by collecting and analyzing detailed, multi-angle videos in collaboration with national-level yoga practitioners.
- Applied OpenCV for advanced image processing, finding patterns in user data to provide accurate posture corrections and generate personalized yoga courses. Accuracy rate hitting 92%.
- Utilized RAG algorithm to develop personalized yoga courses from a database of 5 professionally verified routines and 42 yoga poses.
- Built the user-facing application using Node.js, Express.js, and WebRTC to provide real-time insights and performance metrics, creating a data-driven feedback loop for users.

PROJECTS

Wedding Photo Sharing System |

March 2025 – May 2025

AWS (S3, Lambda, API Gateway, DynamoDB, IAM), Python, JavaScript, HTML, CSS

- Designed and developed a serverless wedding photo sharing system on AWS
- Implemented a guest-friendly web application for direct mobile photo uploads, accessible via QR code, ensuring photos were centrally and securely stored and organized for event hosts.
- Configured API Gateway as the secure front-end for a Python-based Lambda function..
- Leveraged DynamoDB for persistent server-side state management, tracking photo counts per device per event using EventName as Partition Key and a unique DeviceID as Sort Key.

Forex Trading Artificial Intelligence Bot |

August 2024 – December 2024

CUDA/cuDNN, Tensorflow, Keras, Pandas, Numpy, ta

- Drove a project to automate trading strategies by analyzing 200,000 data points to develop and deploy a reinforcement learning agent(DQN/PPO), resulting in a quantifiable profit
- Designed a custom simulation environment incorporating risk-reward criteria, penalties for missed trades, and a 5 and 15-minute historical dataset with 200,000 candles to optimize agent performance.
- Innovated on the initial model by designing and integrating a comprehensive reward system that improved automated decision-making, directly increasing profitability while managing risk.
- Current best version uses a rule based approach with a profit of 52% with minimal drawdown on investment on trading data of the first 6 months of 2024.

TECHNICAL SKILLS

AWS Services: S3, EC2, Lambda, ECS, Route 53, Amazon Aurora, RDS, DynamoDB, ELB, IAM, API Gateway, Amazon Cognito, ElastiCache, AWS Secrets Manager

Data Analytics & BI: MySQL, Amazon Quicksight, AWS Glue, Amazon Redshift, Amazon EMR

ML & Data Science: AWS Sagemaker, pandas, numPy, matplotlib, tkinter, pytogui, pygame, tensorflow, pytorch, mediapipe, openCV, sci-kit learn, forex-python, ta, talib, seaborn

Developer Tools: Amazon Web Services, Microsoft Azure, Git, Google Colab, VS Code, PyCharm, IntelliJ, Eclipse, MsExcel, MongoDB

Languages: Python, HTML/CSS, JavaScript, C++, SQL, Latex

ACHIEVEMENTS

Hackathons :-

- Cerebro 2024 - 2025, Indian Institute of Information Technology Vadodara
- Innoverse HackFest - 2k25, State Level Hackathon, PVG's COET

Paper Published :-

- JOSH-PE Volume-5 (Special Issue):- "Integrating Artificial Intelligence with Yoga: A Systematic Literature Review for ZenKraft"

Communications and Presentation Skills :-

- Demonstrated strong communication and presentation skills by presenting research on 'Integrating Artificial Intelligence with Yoga' at the BC2AD International Conference."

CERTIFICATIONS

- * AWS Certified Solutions Architect - Associate
- * NVIDIA - Fundamentals of Deep Learning
- * AWS Certified Machine Learning – Specialty (In Progress)
- * Google Cloud Computing Foundations - NPTEL
- * Pytorch for Deep Learning - Udemy
- * GRE(Quantitative Reasoning): 165/170
- * BC2AD(International Conference)- Presentation
- * AI BootCamp - Devtown