

# ARYAN BANSAL

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## EDUCATION

### University of California San Diego

Master of Science in Data Science

Jun 2026

CGPA: 3.91

### Vellore Institute of Technology

Bachelor of Technology in Electronics and Communication Engineering

May 2022

CGPA: 3.84

## WORK EXPERIENCE

### Software Engineering Intern, Advanced Driver Assistance Systems (ADAS)

Jun 2023 – Present

Lucid Motors

Newark, CA

- Developed a **text-to-SQL AI agent** to automate debugging queries across software logs and error traces.
- Built a lightweight dashboard to visualize and analyze real-time signals from electronic control units (ECUs).

### Data Scientist II

Jul 2023 – Aug 2024

Lentra AI

Bangalore, India

- Developed and deployed a **text-to-SQL AI agent** for customer analytics, boosting loan disbursements by 7%.
- Built **RAG chatbots** using OpenAI's GPT-3, saving 40+ hours weekly on client support, sales, and onboarding.
- Integrated chatbots with Slack and an Azure-based UI, **enabling real-time updates to the knowledge base**.
- Engineered an AWS-based face recognition system for fraud detection, processing **43M images in 17 days**.
- Designed a face recognition system prototype using **open-source models**, achieving 30% faster response than AWS Rekognition and 95% faster than Azure Face API on LFW dataset.

### Data Scientist I

Jul 2022 – Jun 2023

Lentra AI

Bangalore, India

- Built a greedy programming-based data labeling pipeline, **reducing manual data labeling time by 95%**.
- Developed an MLOps platform on Azure, enabling model deployments to cloud API endpoints in **120 seconds**.
- Created a recommendation system with a precision@5 of 83%, **optimizing product suggestions**.
- Overhauled a fuzzy logic-based Risk Analysis System, increasing the **production accuracy from 38% to 92%**.

## PUBLICATIONS

### Vehicle Number Plate Recognition Using OCR (DOI: 10.1109/I-PACT58649.2023.10434895)

Dec 2023

- Published in the IEEE International Conference on Innovations in Power and Advanced Computing Technologies.
- Implemented OCR system for vehicle number identification from multiple angles and lighting with 93% accuracy.

### Smart Classroom Using Deep Learning and IoT

Apr 2022

- Submitted to the Springer Journal of Reliable Intelligent Environments.
- Orchestrated a cutting-edge system comprising of face recognition-based attendance logging, body temperature monitoring, a hand sanitization station, and email reports.

## PROJECTS

### Low-Code MLOps Python Package | [github.com/ar-bansal/squid-ml](https://github.com/ar-bansal/squid-ml)

Jan 2025 – May 2025

- Coded a no-boilerplate Python package for quickly launching MLOps infrastructure and tracking scikit-learn, PyTorch, and TensorFlow training pipelines.

### Comparison of Image Compression Techniques | [github.com/ar-bansal/image-compression](https://github.com/ar-bansal/image-compression)

Oct 2024 – Dec 2024

- Systematically compared SVD-based image compression to JPEG2000 compression.

## SKILLS

**Languages:** Python (Pandas, Numpy, Matplotlib, OpenCV, PIL, PyTest), C++ , PySpark, SQL

**Frameworks:** ONNX, PyTorch, TensorFlow, scikit-learn, Streamlit, Flask

**AI/ML:** Computer Vision, Convolutional Neural Networks, Face Recognition, Generative AI, GPU Training, Large Language Models, Retrieval Augmented Generation, Supervised Learning, Unsupervised Learning, Transfer Learning

**Cloud and Development:** AWS (CloudWatch, EC2, Glue, Lambda, S3, SQS), Microsoft Azure (Azure AI Services, Storage Containers, VM), Docker, Kubernetes, Google Cloud Platform, Bitbucket, GitHub, Postman, Vast AI

**Others:** Agile (Scrum, CI/CD), Database Design, Data Cleaning, Data Visualization, Debugging, EDA, Testing, Object-oriented Programming, PostgreSQL, Redis, RESTful API, SDLC, Security, SOLID, System Design