

# Jithendra Puppala

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## Education

### New York University

Master of Science in Computer Science

New York, NY

Expected: 05/2027

- Relevant Coursework: Machine Learning, Computer Vision, Foundations of Data Science

### National Institute of Technology Karnataka

Bachelor of Technology in Computer Science and Engineering

Surathkal, India

05/2023

- Relevant Coursework: Data Structures and Algorithms, Digital Image Processing, Probability & Statistics

## Skills

- **Proficient:** Python, SQL, Machine Learning (Supervised / Unsupervised), Data Wrangling, A/B Testing.
- **Experienced:** Deep Learning (TensorFlow, PyTorch), Computer Vision (OpenCV), Model Evaluation & Optimization.
- **Tools & Infrastructure:** REST APIs, FastAPI, Docker, AWS (Amazon Web Services: EC2, S3), GCP, Git/GitHub, Linux.

## Work Experience

### Jio Platforms Limited

Bengaluru, India

#### Data Scientist

06/2023 – 07/2025

- **Tech:** Python, SQL, Data Wrangling, Machine Learning, XGBoost, Random Forest, ARIMA, FastAPI, Docker, AWS, GCP.
- Improved cattle heat detection **precision from 68% to 91%** and **recall from 76% to 95%** by developing machine learning models from scratch, integrating with JioGauSamriddhi devices via FastAPI APIs.
- Enabled **4-hour earlier cattle heat detection via ARIMA-based residual forecasting**, boosting insemination **success by 28%** across **150K+ cattle**.
- Enhanced cattle activity detection **accuracy from 87% to 94%** using **Butterworth filters**, providing better insights for farmers and herd management.
- Optimized model retraining pipeline, slashing retraining time from **18 to under 2 hours** and **data processing from 3 hours to under 7 minutes**.

### Accenture

Bengaluru, India

#### Advanced App Engineering Analyst - Intern

06/2022 – 07/2022

- **Tech:** Python, SQL, Monitoring & Logging Tools (Elasticsearch, Logstash, Kibana, Splunk).
- Researched **observability frameworks** to enhance monitoring, performance, and reliability across enterprise systems.
- Compared **5+ logging/monitoring tools** via incident detection and root-cause analysis benchmarks.
- Presented findings to **25+ engineers**, driving adoption of improved workflows that **reduced mean-time-to-detection (MTTD) by 30%**.

## Projects

### Object Tracking Webapp — YOLOv10 + DeepSORT

08/2025 – 10/2025

- **Tech:** Python, PyTorch, Flask, Socket.IO, Docker, Azure, Deep Learning, Computer Vision.
- Built a real-time multi-object tracking system using **YOLOv10 + DeepSORT**, enabling class-aware, flicker-free tracking and **cutting inference latency by 50 %** through asynchronous CUDA batching and streaming MP4 I/O.
- Deployed the containerized app on **Azure App Service (Docker + ACR + CI/CD)** with reproducible inference pipelines and **> 90 % reduction in transient storage** via TTL cleanup and file-lock safeguards.

### MixMatch on Custom Dataset

03/2022 – 04/2022

- **Tech:** Python, PyTorch, OpenCV, Deep Learning, Semi-Supervised Learning, Computer Vision.
- Implemented **semi-supervised learning** with the **MixMatch algorithm** on a custom **500** image dataset.
- Achieved a **12%** better accuracy over baseline models by applying **data augmentation** and **consistency regularization**.

## Leadership & Achievements

- **Finalist (Top 114 of 10 000+)** **Harvard CELP 2021** — selected for Harvard's global emerging leadership program.
- **JEE Mains Rank: 2683** | **JEE Advanced Rank: 6111** | Top **0.005 %** of **1.15 million** national participants.
- **Campus Director – Millennium Fellowship (UNAI & MCN)** — led SDG-aligned initiatives and mentored 30 fellows across NIT Karnataka.