Jithendra Puppala

jithendra.mail.me@gmail.com | +1 (424) 944-2147 | New York, NY | Jithendra.com | github.com/jithendra1798

Education

New York University — New York, NY
Master of Science in Computer Science — Expected: 05/2027
- Relevant Coursework: Machine Learning, Computer Vision, Foundations of Data Science

National Institute of Technology Karnataka — Surathkal, India
Bachelor of Technology in Computer Science and Engineering — 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 and compared **5 observability frameworks** 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%** across enterprise systems.

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.