Jithendra Puppala

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Education

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

National Institute of Technology Karnataka (NITK Surathkal)   Surathkal, Mangaluru, India
B.Tech in Computer Science and Engineering   05/2023
- Relevant Coursework: Data Structures and Algorithms, Digital Image Processing, Probability & Statistics

Skills

- **Programming**: Python, SQL, Pandas, NumPy
- **Machine Learning**: Machine Learning, Deep Learning, Computer Vision, Semi-Supervised Learning, XGBoost, Random Forest, ARIMA, Time-Series Analysis, Feature Engineering
- **Frameworks**: TensorFlow, PyTorch, Scikit-learn, Hugging Face, OpenCV, Matplotlib, Seaborn
- **Systems**: REST APIs, Django, FastAPI, Docker, AWS (Amazon Web Services: EC2, S3), GCP, MLOps, Git/GitHub, Linux

Work Experience

Jio Platforms Limited   Bengaluru, Karnataka, India
Data Scientist   06/2023 – 07/2025
- Improved the cattle heat detection **precision from 68% to 91%** and **recall from 76% to 95%** by developing ML models from scratch.
- Prepared cattle routine features from **ARIMA-based residual analysis**, helping **early heat detection by 4 hours** for **150K+ cattle**.
- Refined cattle activity detection by filtering accelerometry data with **Butterworth filters**, enhancing **accuracy from 87% to 94%**.
- Reduced model retraining time from **18 hours to under 2 hours** and data processing from **3 hours to just under 7 minutes** by optimizing the end-to-end training pipeline.
- Developed and deployed **REST APIs** to production using **FastAPI**, helping **over 1200 farm owners** with real-time heat alerts.
- Built **Streamlit dashboards** for anomaly monitoring and adoption tracking, giving **200+ field agents** a **10× faster resolution** workflow and fueling **4× YoY revenue growth**.

Accenture   Bengaluru, Karnataka, India
Advanced App Engineering Analyst - Intern   06/2022 – 07/2022
- Conducted a **comprehensive observability** study to improve monitoring, performance, and reliability across enterprise applications.
- Evaluated **5+** monitoring and logging tools by comparing their effectiveness for incident detection and **root cause analysis**.
- Presented findings and best practices to **25+** engineers, influencing the adoption of improved monitoring strategies that reduced the mean time to detection (**MTTD**) by **30%**.

Projects

MixMatch on Custom Dataset   03/2022 – 04/2022
- 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**.

Generic Library Management System (Django)   08/2021 – 12/2021
- Built a **web-based system** with Django, featuring book search, issue tracking, user authentication, and admin dashboard controls.
- Deployed locally using **SQLite and Bootstrap** streamlining book management for **50+ simulated users**.

Leadership & Achievements

- **Finalist** - Harvard Crossroads Emerging Leaders Program (CELP) - 2021
  Selected among top **114** of **10,000+** global applicants for a leadership program organized by **Harvard University**.
- JEE Mains Rank: **2683** | JEE Advanced Rank: **6111** | All India ranks among **1,150,000** participants nationwide.
- **Campus Director** – Millennium Fellowship (UNAI & MCN) for NIT Karnataka.
  Led SDG-aligned civic projects; mentored 15+ fellows; coordinated workshops and campus-wide engagement.
- Webinar Host – Competitiveness Mindset Institute Designed and facilitated student leadership webinar for **3** NIT campuses (NIT Karnataka, NIT Surat, NIT Rourkela) with **over 300 participants**; coordinated content and outreach.