

# Jithendra Puppala

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## Education

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### New York University

M.S. in Computer Science

New York, NY

Expected: 05/2027

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

### National Institute of Technology Karnataka (NITK Surathkal)

B.Tech in Computer Science and Engineering

Surathkal, Mangaluru, India

05/2023

- Relevant Coursework: Digital Image Processing, Probability & Statistics

## Skills

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- **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

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### 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

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### 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

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- **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.