

Vineet Vora

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SUMMARY

Software Engineer and Master's student in Artificial Intelligence with hands-on experience in machine learning, distributed systems, and full-stack development. Proven ability to design scalable ML pipelines, optimize large-scale data processing systems, and deliver high-performance solutions using Python and Java. Seeking Software Engineer / Machine Learning Engineer roles.

TECHNICAL SKILLS

- **Languages:** Python, Java, JavaScript (ES6+), SQL, HTML5, CSS3
- **Backend & Frameworks:** Node.js, React.js
- **Machine Learning:** PyTorch, TensorFlow, Scikit-learn, OpenCV, NumPy, Pandas
- **Big Data & Cloud:** Hadoop, MapReduce, HDFS, YARN, AWS EC2
- **Databases:** MySQL, PostgreSQL, MongoDB
- **Tools & Practices:** Git, Docker, CI/CD, Agile, TDD

PUBLICATION

Preventing Wildfires in Energy Transmission by Automatic Power Line Defects Detection Using Machine Learning and AI

IEEE Conference, NJIT — December 2025

- Developed a deep learning framework using Mask R-CNN and DeepLabV3+ to detect power line defects and vegetation encroachment from UAV imagery in real-time, enabling proactive wildfire prevention.

PROJECTS

- IMF Bz Forecasting using Surya Foundation Model** Dec 2025 – Present
github.com/VineetV2/imf-bz-forecasting-surya | Python, PyTorch, CUDA, Weights & Biases
 - Built an ML pipeline to forecast IMF Bz at T+24h/48h/72h using transfer learning on Surya, a 366M-parameter Vision Transformer pretrained on NASA SDO imagery.
 - Implemented LoRA-based parameter-efficient fine-tuning on 13-channel AIA EUV and HMI magnetograms (512x512).
 - Achieved 3.39 nT RMSE with 96.5% forecasts rated Excellent/Good via Leave-One-Flare-Out CV across 57 solar flare events, with 3.5x efficiency gains.
- Hadoop MapReduce Flight Data Analysis** Nov 2025 – Dec 2025
github.com/VineetV2/hadoop-flight-data-analysis | Java, Hadoop, AWS EC2
 - Developed a distributed analytics system processing 118.9M flight records (11.66 GB) on a 6-node AWS EC2 Hadoop cluster.
 - Achieved 100% data-local map execution and 2.73x speedup through horizontal scaling with custom MapReduce jobs.
- My Personal Portfolio** Feb 2026
vineetvora.dev | HTML, CSS, JavaScript
 - Built a responsive portfolio with Canvas API particle network, kinetic typography, dark/light theming, and accessibility features (ARIA, prefers-reduced-motion); deployed on Cloudflare Pages.
- Attendance Marking System using Face Detection**
github.com/VineetV2/Face-Based-Attendance-Automation | Python, OpenCV, YOLO, FaceNet
 - Built an automated attendance system using real-time YOLO face detection and FaceNet identity recognition with automated Excel-based reporting.

EXPERIENCE

- **Xena Technologies Pvt. Ltd.** Oct 2023 – Dec 2023
Software Programmer Ranchi, India
 - Contributed across the SDLC by developing, testing, and debugging maintainable production code.
 - Improved application stability through unit testing and QA defect resolution.
 - Collaborated with senior engineers to analyze legacy codebases and implement scalable enhancements.
 - Used Git and Agile/Scrum practices for version control and sprint execution.

EDUCATION

- **New Jersey Institute of Technology** Expected Jun 2027
Master of Science in Artificial Intelligence Newark, NJ
- **Vellore Institute of Technology – AP** Jun 2025
Bachelor of Technology in Computer Science India

CERTIFICATIONS

- Enterprise Design Thinking Practitioner — IBM
- Learning Docker — LinkedIn Learning
- Practical GitHub Actions — LinkedIn Learning
- Full-Stack Developer Program — Ethnus