

Kartik Akash Shirode

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Summary: Machine Learning-focused Computer Science student with hands-on experience in NLP, computer vision, and supervised learning. Built end-to-end ML pipelines with measurable outcomes across NLP, computer vision, and civic tech domains.

Education

- Savitribai Phule Pune University, Pune** Aug 24 - Ongoing
B. Tech in Computer Science | CGPA: 8.26 | Second year | Expected: May 2028.
Coursework: Computer Networks | Python (Programming Language) | Statistics | Linear Algebra | Machine Learning | Data Analysis.
- Maharashtra State Board of Secondary and Higher Secondary Education (MSBSHSE)** June 22 - Mar 24
Science (PCM) | 76% | Mar 2024

Experience

- Software Developer Intern - [Rajni Tech Foundation](#)** Sept 25 - Nov 25
 - Designed and deployed company webpage, improving online visibility for 500+ stakeholders.
 - Collaborated with team members to debug and optimize existing application modules.
- Software Developer Intern - [Code Nexln](#)** Nov 25 - Jan 26
 - Led frontend support and QA testing efforts, improving application stability and reducing reported bugs.
 - Managed version control via Git across a 4-member team, reducing merge conflicts by 30%.
- Core Team Member (AI/ML) - [Google Developer Groups](#)** Sept 25 - Present
 - Co-developed a supervised classification demo presented to 50+ attendees at GDG session.
 - Assisted in implementing supervised learning models for internal demos.

PROJECTS

- Vision-Language Model Training (VL-JEPA) [\(GitHub\)](#)** - Dec 25 - Jan 26
- Trained **VL-JEPA (ViT-Tiny)** on COCO dataset using self-supervised learning.
 - Analysed checkpoints, loss trends, hyperparameter tuning and dataset scaling analysis.
 - Achieved 79.86% accuracy on COCO dataset using local training setup.
- MindLens-AI [\(GitHub\)](#)** - Jan 26 - Mar 26
- Built an end-to-end machine learning pipeline using Reddit Mental Health Dataset (~1.85M posts).
 - Implemented explainability and robustness evaluation including flip-rate stability testing (5%), performed EDA.
 - Achieved 76.83% accuracy, 85.15% ROC-AUC, 5% flip rate.
- Civic Issue Reporting System [\(GitHub\)](#)** - Feb 26
- Developed a data-driven civic issue reporting and management system.
 - Designed structured data storage and implemented CRUD operations for issue tracking.
 - Integrated Google Gemini API for text processing and implemented a local image classification model for issue categorization.
- Fake News Detection using SVM [\(GitHub\)](#)** - Nov 25 - Dec 25
- Built a text classification model to detect fake vs real news using Support Vector Machine.
 - Applied text preprocessing techniques including tokenization and TF-IDF vectorization and pipeline.
 - Achieved 89.86% classification accuracy using SVM with TF-IDF features.

SKILLS

- Programming & Databases:** Python, SQL, MySQL
- Data Science & Analytics:** Data Analysis, Data Cleaning, Feature Engineering
- Machine Learning:** Supervised Learning, Classification, Regression, Model Evaluation (Precision-Recall, Confusion Matrix)
- Algorithms:** Linear Regression, Logistic Regression, KNN, Decision Trees, Random Forest
- Libraries & Tools:** NumPy, Pandas, Matplotlib, Scikit-learn, Flask
- Data Visualization & BI:** MS-Excel, Tableau, Power BI
- Deep Learning Exposure:** Vision Transformers, Self-Supervised Learning, VL-JEPA, NLP, TensorFlow, Model Deployment
- Development Tools:** Git, GitHub, Jupyter Notebook, VS Code, HuggingFace