

Vishak Bharadwaj

Machine Learning Engineer III

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Bengaluru, India

PROFILE

Machine learning engineer with 6+ years building end-to-end ML systems — from deep learning research to production monitoring and MLOps pipelines. Experienced in model explainability, deployment, and drift monitoring at scale. Strong foundations in computer vision, NLP, and quantitative modelling.

EXPERIENCE

Machine Learning Engineer II → III

Jun 2022 — Present

Glance · Bengaluru, India

- Two-Tower Recommendation Model:** Co-built and main reviewer for the two-tower service; led Pinecone vector DB POC with batch data ingestion and indexing.
- Popularity Pipelines:** Managed popularity pipelines; user profiling (peak-heavy / CTA-heavy) delivering **30% delta** on Samsung; LGBM model achieving **12% delta**.
- AI Annotation Setup:** POC for annotation workflows; GenAI-based image metadata tagging with LLMs and prompt engineering; drove annotation cleanup and cost reduction.

Machine Learning Engineer

Nov 2020 — Jun 2022

Census AI · Bangalore, India

- Explainability Module:** Used SHAP and LIME to explain model predictions and provide insight into why models produce the outputs they do; logged and monitored using MLflow, Prometheus, WhyLogs and Grafana.
- Drift Prediction Module:** Created APIs for continuous monitoring of model performance and production data; monitored data and concept drift with custom code; built data quality, drift and performance monitors on Prefect / Airflow jobs.
- Deployment & Infrastructure:** Containerized and deployed using Docker, GitHub Actions and AWS ECS; orchestrated on Kubernetes.

Software Developer & ML Instructor

Jul 2018 — Oct 2020

Omni-Eye / The Valley Edutech · Bangalore, Karnataka

- Eye In the Sky:** Stacked deep learning models for real-time object detection, facial recognition (MTCNN + finetuned PyTorch) and plate detection (OCR pipelines). Tracked all experiments with MLflow.
- Image Search & Clustering:** CNN autoencoder converting unlabelled images to feature vectors; KNN and LSH (Locality Sensitive Hashing) for fast similarity search + unsupervised clustering.
- Student Platform & Instruction:** Portal for tracking student progress (Flask, MongoDB) with GitHub commit-tracking APIs; instructed Python, ML and Deep Learning cohorts with a code-first, project-oriented approach.

NOTABLE PROJECTS

- ResNet50 on ImageNet-1k from Scratch** [ERA4 · AWS EC2](#) — No pretrained weights; trained on full ImageNet-1k on EC2; 75%+ top-1 accuracy; ~10,000 people globally. HuggingFace demo.
- YouSum — AI YouTube Summarizer** [Chrome Extension](#) — Streaming YouTube summaries via Claude & ChatGPT APIs; 5 detail levels, background generation, persistent storage.
- YOLO Object Detection** [Andrew Ng · C4](#) — Real-time detection for autonomous driving; bounding box prediction, IoU and non-max suppression from scratch.
- Face Recognition with FaceNet** [Andrew Ng · C4](#) — One-shot face verification using the FaceNet architecture and triplet loss.
- Poetry Analysis Studio** [Flask · Gemini AI](#) — Poem analysis and generation (Haiku, Sonnet, Limerick, Free Verse) with detailed literary analysis via Google Gemini.
- Neural Machine Translation with Attention** [Andrew Ng · C5](#) — Seq2seq model with an attention mechanism, learning to focus on relevant input positions at each decoding step.
- Rossmann Store Sales Prediction** [Kaggle · Top 0.4%](#) — Deep embedding network; 10% RMSPE; 11th out of 3,000+ teams.
- BlueBook for Bulldozers** [Kaggle · Top 0.4%](#) — Random Forest Regressor; RMSLE 0.2214; 2nd out of 476 teams.

DOMAINS

Machine Learning Deep Learning
MLOps Computer Vision NLP
Model Monitoring Data Science

STACK

Python PyTorch TensorFlow
Scikit-learn Pandas · NumPy
MLflow Docker Airflow Prefect
Grafana SHAP / LIME Seldon Alibi
WhyLogs Flask GitLab CI/CD

EDUCATION

Bachelor of Engineering
B M S College of Engineering · Bangalore
2012 — 2016

CERTIFICATIONS

Deep Learning Specialization
Andrew Ng · deeplearning.ai
END2 — Extensive NLP via Deep Models
The School of AI
ERAv4 — Extensive & Reimagined AI Program
The School of AI