

Ankur Singh

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Summary

Software Engineer with **7 YoE** (5 industry and 2 academia), specializing in **building and operating AI Infra** — spanning data curation, **experimentation**, training, **deployment**, **observability**, and **developer tooling**. Proven track record of **leading ML teams**, establishing **engineering best practices**, and **enabling rapid shipment** of ML features and products in fast-paced, ambiguous environments. **Kaggle Competitions** and **hackathon winner**, and **open-source** contributor

Technologies

Languages: Python, SQL, JavaScript | **ML/AI:** PyTorch, HF Transformers, DeepSpeed, OpenAI Triton, Lightning, vLLM | **Data:** Ray, Spark, Postgres, MongoDB, Elasticsearch | **Backend:** FastAPI, Django, REST, gRPC | **Cloud:** AWS, GCP | **DevOps:** Docker, K8s, CI/CD | **LLMs:** **Torch Distributed** (FSDP), **Post-Training** (LoRA, DPO, Distillation), Quantization

Experience

AI Solutions Engineer, Intel – Santa Clara, CA May 2023 – Present

- **Accelerate GenAI model performance by up to 3x** through profiling and optimizing PyTorch workloads – including **distributed post-training**, **quantization**, and **inference** – using Intel's oneAPI stack and latest hardware (Xeon, AI PC)
- **Drove adoption of Intel hardware for LLM workloads** by designing and maintaining end-to-end GenAI code samples and tutorials, enabling developers to deploy optimized GenAI solutions across AI PCs, OpenShift clusters and AWS

Graduate Research Asst., SJSU Research Foundation – San Jose, CA Sep 2022 – May 2024

- **Enabled real-time edge inference** by optimizing YOLOv8 for object detection and segmentation on NVIDIA Jetson (latency \approx 150 ms), supporting autonomous driving use-case
- **Pioneered a Decentralized Traffic Flow Prediction system** using **Federated Learning**, improving privacy preserving forecasting across nodes, published in *IEEE* 📄

Machine Learning (ML) Lead, Zoop.One – Pune, India Sep 2021 – July 2022

- **Saved \$1M+ annually** by leading the design and deployment of 4 core ML services housing 20+ deep learning models; scaled system to serve over **2M monthly requests** through a modular, cloud-native architecture
- **Delivered industry-leading OCR pipeline** (7+ CV models) for ID card parsing with **6× faster response time** (\approx 1s) and superior layout-aware accuracy—beating commercial APIs in both latency and precision
- **Built a real-time liveliness detection service** with face recognition, matching, eye tracking, and spoof detection; achieved **sub-200ms latency**, strengthening anti-fraud protection across customer onboarding workflows

CoFounder and CEO, AI Adventures – Pune, India Aug 2018 – Sep 2021

- **Delivered automation solutions saving 100+ manual hours/week** by leading development of diverse ML projects, including **image-based product search**, **receipt digitization**, and **visual defect inspection** for enterprise clients

Projects / Open-Source / Competitions

Snapjobs - AI Platform for job seekers

- **Scraped and indexed 20K+ job listings** from 1,000+ companies using Ray and LLM-based extraction; enabled semantic search with Elasticsearch
- **Fine-tuned and deployed LLaMA2-7B** to generate personalized resumes, enhancing relevance and job targeting

OPEN SOURCE

- Contributed to high-impact, PyTorch native ML libraries including **torch tune**(LLM post-training) and **fast.ai**
- Authored Python packages **Colab-everything** (40K+ downloads) & **torchserve-client**, simplifying workflows for ML prototyping and model inference

COMPETITIONS

- **Grand Prize Winner**, AI for Social Good **hackathon @ Intel Innovation 2022**
- **3x Kaggle Bronze Medalist** – Shopee: Price Match Guarantee, Global Wheat Detection, and MoA Kaggle competition

Education

San Jose State University, MS in Software Engineering Aug 2022 – May 2024 (3.9/4.0)

College of Engineering Pune (COEP), BS in Information Technology Aug 2014 – May 2018 (7.7/10)