GAURAV SHARAN SRIVASTAVA gaurav_sharan@berkeley.edu | linkedin.com/in/gauravsharans | (510)-423-1790

Machine Learning Engineer with 6 years of experience turning cutting-edge NLP, Computer Vision and Gen AI research into shipped products. Skilled in parallel-computing pipelines, precision model fine-tuning, and crafting explainable & interpretable systems - melding data-science rigor with robust software engineering to deploy low-latency, cost-efficient models that drive outsized impact.

WORK EXPERIENCE

Computer Vision Engineering Intern May 2024 – Oct 2024
GetReal Labs, San Mateo, USA

Deepfake Detection Bench: Deepfake detection models for streaming video input and offline videos

- Curated a high-fidelity deepfake corpus with a balanced domain/pose distribution using active-learning uncertainty scores on DeepFace to minimize label skew, and created a ~2M+ image dataset of 6 ethnic and 2 gender categories with >98% conf.
- Fine-tuned a SWIN V2 backbone using a multi-GPU AWS instance (4×A10G) with PyTorch DDP, leveraging Sharpness-Aware Minimization (SAM) and cosine-annealed one-cycle LR to reach ~95% in-domain ROC-AUC while cutting training time by ~80%
- Replaced AWS Rekognition with an in-house extractor/classifier using RetinaFace with an IoU threshold of 0.95 that reduced per-frame cost > 10x and deployed the real-time detection solution delivering < 10 ms latency at 480p - 1080p 30 FPS stream

Graduate Student Researcher Mar 2024 – Aug 2024
Haas School of Business, University of California - Berkeley, USA

- Fine-tuned BERT-base on ~2k CEO press releases, tripling the effective training set via nlpaug with contextual and character-level augmentations; achieved 89% F1-score (+13 pp over baseline) accelerating analyst triage time 4x
- Built a high-precision entity-resolution pipeline for 100k company names across SEC 8-K filings using TF-IDF cosine + n-gram Jaccard similarity techniques, delivering 99% accuracy on the test set, and cutting manual deduplication hours by 90%

Tech Lead, Machine Learning Engineer Jan 2018 – Jul 2023
Tata Consultancy Services (TCS) - Research and Innovation Lab, New Delhi, India

TCS ADD- Medical Monitoring: Clinical-data analysis platform

- Led a team of 4 engineers to architect, build, and launch the platform's pilot, unlocking $3-4M/yr savings for a 1B+ portfolio
- Forecasted clinical-trial workload for site-managers across ~35k studies for J&J by building a Bi-LSTM model on multivariate site-activity logs with an MAE of 1.8 min (+-2%), enabling automated CRA staffing and reducing overtime costs by > 20%
- Conceptualized an LP algorithm using Knapsack to decide trial visits improving scheduling efficiency by 3x across pilot studies

TCS ADD- Risk Based Quality Management: Intuitive clinical-trial management platform

- Led a cross-functional team of UI/backend/QA to build the platform, generating ~6M in revenue through enterprise clients
- Developed a Risk Analysis & Categorization Tool (RACT) in R to calculate dynamic site-level risk scores using Bayesian attrition priors and control-limit theory, improving audit readiness and reducing the impact of attrition and reporting biases by 70%
- Engineered an Airflow-orchestrated ETL mesh (SQL stored procs, window functions, partitioned indexes) automating end-to-end platform workflows including model re-training; reduced ad-hoc query latency & ingestion time from 8h to 55min (-87%)

Signal Detection: Pharmacovigilance signal detection tool for effective drug safety

- Automated symptom-and-diagnosis extraction from 1.2M+ medical reports by training a Bi-LSTM + CRF sequence-tagger, and achieved an F1-score of 0.91 (+23 pp over rule-based NER), reducing medical-reviewer annotation time by 70%
- Advanced a Drug Safety Tool with a regularized logistic-regression model (features: empirical-Bayes shrinkage, MedDRA hierarchy one-hots), that outperformed FDA's Gamma Poisson Shrinker (GPS), with an AUC-ROC score of 0.83 (+0.16 over GPS)

Sanitation Inspection: AI-powered automated sanitation inspection app for state public schools

- Co-developed a hierarchical sanitation-inspection model trained on 120k images using a dual-head MobileNet-V2 SSD, classifying hygiene compliance for washroom across 45k+ schools, achieving ~90% accuracy and ~92% recall on unclean cases
- Built the end-to-end ML pipeline with geo-tagged capture, real-time retake prompts, and image validation processing ~0.5M images/day, powering dashboards and alerts, leading to a ~28% drop in sanitation-linked girl's absenteeism as per gov. reports

SKILLS

Languages	Python 3, R, SQL, Bash, MATLAB, C++, HTML, LaTeX
Frameworks & Tools	**ML/Deep Learning:** PyTorch, TensorFlow, NLTK, OpenCV, Torchvision, Albumentations, Hugging Face **Generative AI:** LangChain, LangGraph, Ollama, LlamaIndex, CrewAI **MLOps & Platforms:** Ray, Dask, ONNX, CUDA, MLflow, Airflow, Spark, Hadoop, Docker, AWS, Git

EDUCATION

University of California, Berkeley Aug 2023 – Aug 2025
Master of Information Management and Systems, 3.7 GPA

New York University Jul 2022 – Oct 2022
Bridge to MS Computer Science, Distinction

Kamla Nehru Institute of Technology, Sultanpur, India Aug 2013 – May 2017
Bachelor of Technology, Electrical Engineering, First Class