Harshita Poojary

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Education

University of Southern California, Los Angeles, CA. **Aug 2023 - May 2025**
Master of Science - Computer Science (Artificial Intelligence) **GPA: 3.85/4.00**
Coursework: Analysis of Algorithms, Deep Learning, Artificial Intelligence, Machine Learning

University of Mumbai, Mumbai, India. **Jul 2015 - May 2019**
Bachelor of Engineering - Computer Engineering **GPA: 3.83/4.00**
Coursework: Soft Computing, Distributed Databases, Web Technologies

Technical Skills

Core Programming Languages: C, Python
Other Programming Languages: NodeJS, JavaScript, AngularJS, HTML/CSS, Java, C++
Databases: MongoDB, Redis, MySQL, ElasticSearch, Milvus
Frameworks & Tools: Docker, Kubernetes, PyTorch, Keras, TensorFlow, OpenCV, AWS, Azure, GIT, Jira, Postman, Swagger, Jenkins, PowerBI, Tableau

Work Experience

Data Science Intern **Jun 2024 - Aug 2024**
Zero True, New York.
- Implemented data analysis and exploration of around **10 datasets for clients** leveraging visual components of Zero-True for effective data filtering.
- Integrated SQL database to store datasets of **over 10k records** and provide dynamic visualizations with the filters selected by the user.
- Collaborated with the team to implement **5** additional UI components from **Vuetify**, contributing to the development of a seamless Python and SQL integration for creating interactive reports and dashboards.

Deep Learning Researcher **Jan 2024 - Present**
Integrated Media Systems Center, Los Angeles, California.
- Extracted and filtered **10k** street view images and implementing models using Deep learning and OpenCV to track and count homeless encampments in the city of Los Angeles.
- Conducted grid-based analysis of the hotspots of homeless encampments to generate heatmaps in the geospatial view across **5** grid intensities in **502.7** square miles.

AI/ML Engineer **Jan 2022 - Jul 2023**
Reliance Jio, India.
- Optimized **face detection Retinaface** model with model compression using **TensorRT** to reduce inference time by **40%**.
- Automated CI/CD pipeline for multiple projects including Video Motion Detection, Face registration, and Recognition.
- Implemented **mobile-based spoof detection** to prevent false facial verification using a photo or video with an accuracy of **90%**.
- Mentored **12** developers in implementing AI solutions to identify Grooming Scores and Punctuality Scores for individuals.

Software Developer (Backend) **Jun 2019 - Dec 2021**
Reliance Jio, India.
- Collaborated with 3 teams to integrate 250+ Newspapers, 150+ Live News channels, 800+ Magazines, and News in 13 languages across multiple media applications, increasing the user base by **50%**.
- Enhanced performance of APIs by **20%** with the integration of performance management, memory optimization, and alert management systems using **Kibana**, **Prometheus**, and **Grafana**.
- Increased user engagement by **30%** by customizing content as per user preferences, content history, and locality, delivering local news, user recommendations, and genre-based content.

Projects

Analysing Model Perfromance with Knowledge Distillation and Quantization (PyTorch, Python) **May - Sep 2024**
- Fine-tuned LLama-3 model with 4-bit quantization using logit distillation with LoRa (Low-Rank Adaptation).
- Computed benchmark against GSM8k dataset with 8-shot learning to analyze the performance against the original model with 8 billion parameters.

Distinguish AI generated and Real Human Faces (PyTorch, Stable Diffusion, Python) **Aug - Dec 2023**
- Analyzed existing models for Generating human faces including GLIDE, DALLE 2, and Stable Diffusion.
- Implemented CNN networks and Transformers to classify images into real and fake with **80%** accuracy.

Analyzing AI Images for Object Detection and Classification (DALLE-2, PyTorch, Keras) **Sep - Dec 2023**
- Analyzed existing domains that lack training datasets to generate AI-synthesized images for learning.
- Improved the detection of survivors in post-earthquake scenarios by **5%** using AI-generated images with **DALLE-2**.

Sentiment Analysis (Python, PyTorch, AWS) **Jan – Apr 2020**
- Implemented Sentiment Analysis on movie reviews from **IMDb** dataset using XGBoost.
- Utilized **Amazon Sagemaker** to create EC2 instance and deploy an API for the model.

Achievements & Certifications

- Course Grader for Database Systems in Fall 2024
- **Completed Courses**: Computer Vision (Dec 2020), Artificial Intelligence (Sep 2020), Deep Learning (Apr 2020), Machine Learning (Sep 2018)
- **Ongoing Courses**: GAN, MLOps, Building Real-Time Video AI Applications
- Received Award of academic excellence for securing Top 3 position in the Sophomore year.