Anirudh Thatipelli

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EDUCATION

University of California, Riverside MS in Computer Science [3.88/4.0 GPA]   **06/2024(anticipated)**
Shiv Nadar University, India B.Tech in Computer Science   05/2019

TECHNICAL SKILLS

Languages and Frameworks: Python, C++, MySQL, Java, C, HTML, CSS
Libraries: Pytorch, Tensorflow, Scikit-learn, Pandas, OpenCV, Scipy, Keras, Matplotlib, Seaborn, Plotly
Tools: Git, Bash scripting, Jupyter, AWS, GCP, Linux

WORK EXPERIENCE

Applied Science Intern, Amazon Go   06/2023 – 09/2023
- Designed and proposed a novel **streaming-temporal-action-localization-based** solution for fraud detection in physical retail stores, achieving a **mean average precision(mAP)** of **0.9**.
- Trained **action recognition** models using **PyTorch** on **EC2 instances** and uploaded **data** and **models on s3 buckets.**
- Collected, cleaned, and organized the data for training deep learning models.
- Documented progress for the full pipeline for reference by other engineers/teams.

Machine Learning Research Fellow, Skit.AI   04/2022 - 07/2022
- Surveyed research and trained End-of-utterance detection baselines in **PyTorch**.
- Released a **75-length** phone-number-entity capture dataset to analyze the effect of turns on capturing complex entities like phone numbers in an Indian accent. **Link**: https://github.com/skit-ai/phone-number-entity-dataset

Research Intern, Mohamed Bin Zayed University of Artificial Intelligence   08/2021 - 03/2022
- Proposed a novel **spatiotemporal** enrichment module, **STRM,** based on **attention** and **MLP-mixing techniques** for **few-shot action recognition.**
- Achieved an absolute gain of **3.5%** over the previous **SOTA** on the challenging **ego-centric Something-Something** dataset. **1st author** paper accepted at **Conference on Computer Vision and Pattern Recognition(CVPR), 2022.**
- Trained **models** on **distributed Linux slurm clusters. Pytorch Code Link:** https://anirudh257.github.io/strm/

Research Assistant, International Institute of Information Technology   05/2019 - 05/2021
  Pose-based Human Action Understanding
- Curated **3D pose** annotated datasets, consisting of over **100,000** samples, and presented baselines to include **mime-based** action sequences.
- **2nd author** paper accepted at **International Journal of Computer Vision (IJCV), 2021.**
- Used **SMPL-X** model for pose extraction. **Pytorch Code Link:** https://github.com/skelemoa/quovadis/

  Augmented Joints Action Recognition
- Created a full-body skeleton action recognition dataset, including fine-grained skeleton joints to improve pose-based recognition of subtle human actions.
- Selected as **ORAL** at the **Indian Conference on Computer Vision, Graphics, and Image Processing (ICVGIP 2021).**
- **PyTorch Code Link:** https://skeleton.iiit.ac.in/ntux

Software Development Engineering Intern, Dell Technologies   01/2019 - 04/2019
- Built BreakGlass **Server Access Tool** in **Python** to automate server access checks for users in **1/6th** the original time.
- Formulated UI of a **Bartender web application** in **Javascript** to visualize the movement of goods along different lines in the factory.
- Won the **Dell Dorm room** hackathon for proposing a physics-based solution to detect **box damage** during transit.

Research Intern, International Institute of Information Technology   05/2018 - 07/2018
- Collated and processed a dataset using over **500** retinal OCT scans, and devised a tool to **automate** the **annotation procedure** of the macular region in the OCT scan.

PROJECTS

PetFinder.my Adoption Prediction Kaggle Competition   01/2019 - 04/2019
- Proposed a **multimodal model, combining** visual and textual features to predict the speed of a pet being adopted.
- Analyzed and preprocessed a dataset of **20000 samples** with over **23 attributes** and extracted **DenseNet** features.
- Trained an **XGBoost** ML model to predict adoption speed. Ranked **125th** out of **2023** teams and awarded the **Bronze medal.**

UCR-Bot   03/2023 – 05/2023
- Developed an **end-to-end** chatbot in **Langchain** and **Python** for answering UCR-specific queries.
- Designed a **retrieval system** using **FAISS** and the **extracted embeddings.**
- Utilized the open-source **Declare-Lab Flan-Alpaca** language model to answer queries.