Abhishek Kumar

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EDUCATION

UNIVERSITY AT BUFFALO MS IN COMPUTER SCIENCE

December 2022* | Buffalo, NY | GPA: **3.668 / 4.0**

COURSEWORK: Deep Learning, Machine Learning, Computer Vision, Sports Analytics, Algorithms, Distributed Systems

SRM UNIVERSITY B. TECH IN MECHANICAL ENGINEERING

May 2017 | Chennai, TN | GPA: **3.94 / 4.0**

RELEVANT COURSEWORK: Advanced Calculus, Numerical Methods, Robotics, MATLAB, Intro to Programming

SKILLS

(**proficient**) Python, C++, PyTorch, Tensorflow, Keras, SQL, Git, Docker **(familiar)** Flask, OpenCV, Kafka

EXPERIENCE

UNIVERSITY AT BUFFALO | TEACHING ASSISTANT May 2022 – July 2022 | Buffalo, NY

- Guided students to develop deep learning projects for video analysis in the sports domain
- Assisting professor David Doermann in conducting classes and grading student presentations.

INFOSYS | SYSTEMS/SOFTWARE ENGINEER Feb 2018 – Aug 2020 | Bhubaneswar, OD | www.infosys.com

- Developed a plant lifecycle management application for end to end manufacturing management.
- Created invoice correction application for business users in purchasing domain.
- Integrated Google Map API with CUMMINS Global Service Locator application.
- Automated cron jobs to improve process control and increased batch transfer efficiency by 8%.
- Migrated CUMMINS internal applications from Oracle Apex12 to Apex17. Reduced login latency by 20%.

PROJECTS github.com/abhinine4

SOCCER PLAYER RE-IDENTIFICATION | Python, C++, PyTorch, Torchreid

- Developed a soccer player Re-identification model for SoccerNetV2 challenge hosted by Sports Radar.
- Proposed model consisted of a two stream CNN network to learn part features and appearance features separately using pretrained networks and optimized using triplet an Id loss. Ranked 8th in the competition

TEXT 2 IMAGE SYNTHESIS USING GAN | Python, Tensorflow, FID, Word2Vec, Resnet

- Implemented a text to image generation model using Deep Residual GANs on Flickr8k dataset.
- Trained the dataset on a modified generator with Resnet blocks to generate text-guided fake images.

PANORAMA STITCHING | Python, OpenCV

- Created a program to stitch stereo images pairs to build a panorama with SIFT features.
- Implemented K-Nearest Neighbor, ratio testing and RANSAC to stitch images with seamless boundaries.

RESEARCH

- Ear Hair Cell detection and counting using Deep Neural Networks under Prof. Junsong Yuan and Prof. Jinjun Xiong.
- Lidar Point Cloud Segmentation using Local Feature Aggregation for autonomous vehicles (Independent).