Abhinav Jagan Polimera

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Education

Birla Institute of Science and Technology, Pilani - Hyderabad Campus **2020-2024**

- B.E Computer Science - 7.92/10 CGPA
- **Courses**: Data Structures & Algorithms, Object Oriented Programming, Operating systems, Database Management Systems, Artificial Intelligence, Machine Learning, Blockchain Technology, Computer Networks, Computer Architecture, Internet of Things, Computer Graphics

Work Experience

Cisco, Banglore **Jan 2024 - Present**

Technical Intern, Distributed Systems organization *On-site*

- Optimizing the test cases used for testing features, end-end testing and deployment of features present in the OS of a router.

Shris Infotech, Hyderabad **Jun 2022 - Jul 2022**

Software Intern *Remote*

- Developed a face recognition app, transforming contact organization with a user-friendly app, making calling as easy as a single click on someone's face.
- **Technologies used** : Python libraries - deepface, OpenCV, retina-face, Flutter, Dart

Projects

Performance Assessment of Neural Radiance Fields and Photogrammetry **Publication Link**

- Worked on comparing one of the latest 3D model reconstruction algorithms (Neural Radiance Fields) to the most used algorithm(Photogrammetry) in this domain for 3D Reconstruction of Man-Made and Natural features.
- Analysis involved an in-depth understanding of Neural Radiance Fields,neural networks and volumetric rendering. Photogrammetry which works on the principle of image stitching and other CV concepts.

Remote Drone surveillance - Machine learning/image processing **Publication Link**

- Aims at preventing security threats at remote locations with the use of drones and machine learning algorithms. The technologies used include OpenCV , image processing libraries and object detection algorithms(YOLO).
- Various object detection algorithms having been analysed. After detecting the various objects in a frame, threshold values have been set to classify an activity as illegal based on time and count of number of classes present

Augmented Reality Assisted Lego Construction **-**

- Aims at developing a user-friendly app that assists users in assembling LEGO constructions with the help of AR. Worked on building a recognition model which identifies the state of the partially constructed lego set, and building the dataset for training the model.
- Research project under Prof. Tathagata Ray, included reading various research papers in the object detection domain, experimenting with various models like YOLO, VGG, building our own CNN and different methods to create a good dataset similar to synthetic data generation.

Technical Skills

ML :Neural Radiance Fields, OpenCV, Image processing libraries, Object detection algorithms(YOLO), CNN
Languages: Python3 , C++, Java, JavaScript
Others Spring Boot, SQLDatabase, React,HTML, CSSFlask, HTML, CSS

Extra Curricular Activities

- **Graphic Designing**: Experienced self-taught graphic designer actively involved in college designers and Art clubs, also worked on freelance projects for clients.
- **Photography**: Self-taught photographer skilled in Adobe Lightroom , Adobe Photoshop, and Google Snapseed. Actively involved in college photography club.
- **CBSE-southzone chess tournament**: represented my School in the CBSEsouth-zone cluster and won three out of six matches.