

Akash J

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#### **EDUCATION**

•IIIT, Hyderabad

MS in Computer Science and Engineerin

•TKM College of Engineering, Kollam 2020-2024

Btech Computer Science and Engineering CGPA: 8.8/10

•St Antony's, Kanjirapally

Higher Secondary (12 th)

Percentage: 95/100

#### EXPERIENCE

•IIT-Madras AGCL Lab Dec 2022 - Dec 2023

Research and Development Intern

Madras

2017-2019

- Involved in a project related to the classification of sketches and CAD models, shape completion.
- Investigate various deep learning techniques to inpaint user drawn ,unfinished CAD Sketches.
- Tried out different architectures likes Pix2Pix, CycleGAN etc.

•IIIT Hyderabad July 2023 - Mar 2024

Research and Development Intern

Hyderabad

- Involved in a project for point cloud classification and part segmentation using adversarial knowledge distillation.
- Investigated in transferring knowledge from a large teacher model to smaller student model.

#### Personal Projects

# Optimization of NeRF Training

2023

Selecting only important pixels and rays for reconstruction

- NeRF (Neural Radiance Fields) is a method that achieves state-of-the-art results for synthesizing novel views of complex scenes. The project focuses on selecting and sampling important rays during NeRF training to enhance the model's learning of fine scene details. By prioritizing these significant rays, the training process becomes more efficient, reducing overall computation time while improving the quality of the rendered images. This targeted ray sampling strategy ensures that the model captures crucial aspects of the scene with higher fidelity, leading to an increase in PSNR (Peak Signal-to-Noise Ratio), which reflects sharper and more accurate image reconstruction.
- Tools used: Pytorch

•BloodDonor 2023

A website for finding out the nearest donors and recipients

- The software is designed to efficiently connect individuals in need of blood donations with the nearest five available donors based on the specified blood type. By inputting the required blood type, the system quickly searches its database of registered donors, identifies those in closest proximity, and initiates contact with them. This streamlined process ensures timely and accurate matching, enhancing the chances of meeting urgent blood donation needs while minimizing response time. The system can play a crucial role in life-saving situations by facilitating rapid donor mobilization.
- Tools used : React, Gps, Tillow

•Enchore 2022

A website for integrating achievements

- This website provides a simplified means of tracking users' accomplishments by automatically integrating activity points depending on the certifications they own. Upon uploading credentials from several workshops, internships, or courses, customers can instantly see an update to their activity points. Additionally, the portal helps users identify suitable seminars and internships, fitting with their interests and increasing their professional advancement. It provides a one-stop shop for managing successes and discovering fresh chances to advance professional growth.
- Tools used : React, Tailwind

•Hestia Website 2022

Developed national level tech festival frontend

- Tools used: React, Tailwind

### TECHNICAL SKILLS

Languages: Python,C,Java,Javascipt
Machine Learning:Pytorch,Tensorflow
Web Technology: React,HTML5,CSS,MySql

### **PUBLICATIONS**

# •SketchCADGAN (Computers and Graphics-3DOR)

2023

— To address this problem with incomplete sketches, we propose a new generative adversarial network called Sketch-CADGAN. This network uses a two-stage cascaded architecture, with the first network attempting to predict a CAD model image from an incomplete sketch and the second network using the CAD model image to predict a completed sketch.

## •Adversarial Learning based Knowledge Distillation on 3D Point Clouds (WACV-2025)

2024

- This paper proposes PointKAD, an adversarial knowledge distillation framework for point cloud-based tasks. PointKAD includes adversarial feature distillation and response distillation with the help of discriminators to extract and distill the representation of fea- ture maps and logits.

#### **ACHIEVEMENTS**

- •Second Prize ML'thon
- •Second Prize Krafnight