ANIRUDH GOVIL

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EDUCATION

B.Tech. with Honours in Computer Science and Engineering   2020-2024
International Institute of Information Technology, Hyderabad   CGPA 8.97/10
Relevant Coursework: Robotics, Computer Vision, Graph Deep Learning, Advanced NLP, Reinforcement Learning

LANGUAGES & FRAMEWORKS

Python (*Pytorch, Tensorflow, Open3D, OpenCV*), C/C++(*TensorRT, Latency minimisation*), Javascript(*MERN Stack*)

EXPERIENCE

Computer Vision Research Engineer   May 2024 - Present
DreamVu   *Hyderabad*

- R&D on image processing, stereo depth detection, semantic segmentation & obstacle detection from 360° video for robots. Built the backend database, front end dashboard, low latency networking and quantised models for live video object & person detection & tracking on edge devices. Built scalable automated pipelines for extracting depth, pose and semantic segmentation for building 3D simulation environments from monocular videos.

Computer Vision Engineer   Dec 2023 - May 2024
Game Theory   *Hyderabad*

- All foundational code for camera calibration, real time object detection & tracking, stereo triangulation, interpolation and 3D trajectory generation for fast-moving objects using low frame-rate cameras and edge devices.

Research Student   August 2022 - May 2024
Robotics Research Centre   *IIIT-Hyderabad*

- **Semantic Segmentation and Navigation of 3D Indoor Scenes**, *IIIT-H RRC, MIT CSAIL*
  We segment indoor environment pointclouds into semantically significant zones, that can later be queried in natural language. Oral Presentation at ***IROS 2024 and OpenSun3D @ CVPR 2024***. Sup. by Prof.Madhava Krishna

  Grasping in Cluttered Environments, *IIIT-H, University of Minnesota RPM Lab*
  Investiagted Sampling based MPC in cluttered environments and Visual Servoing for Robot Handover.

Precog   *IIIT-Hyderabad*

- **Improving Hinglish Code-Mixing for LLMs**, *IIIT-H*
  LLMs tend struggle in code-mixed tasks. We attempt to improve their performance using our unique data-sets and improve cross-lingual understanding using code-mixed data. Published at ***TALLIP 2025***

- **Investigating OCR In VLMs**. *IIIT-H PreCog*
  We design probes to test and characterise CLIP's ability to recognise characters and the semantics of text in scenes. Our work was featured at UniReps @***NeurIPS 2024***

PROJECTS

Reinforcement Learning for Bidding Strategies   Spring 2024
Both closed form and deep-learning based solution to the problem of dynamic house pricing in a bidding environment.

Improving Factual Consistency for Abstractive Summarisation   Monsoon 2023
Used a Q&A based consistency metric to fine-tune a seq-seq BART model to produce factually consistent summaries.

Low Light Image Enhancement using U-Nets with Attention   Spring 2023
Added attention blocks and pruned the U-Nets to achieve better denoising and colour correction.

Neural Architecture search on Graphs   Spring 2023
Automated finding an optimal GNN for a given dataset by pruning a super-graph and introducing cross connections.

Stereo 3D Reconstruction   Monsoon 2022
A Structure from motion pipeline rebuildS a 3D environment using a stereo camera. An interactive interface lets you test out various filters and algorithms and compare their performance in real time.

AWARDS & ACTIVITIES

- Megathon 2022 Winner : Won both rounds of the Stellantis Hackathon and a 1.8 lakh cash prize. Created an environment mapping pipeline for cars using Block-NeRFs.

- PM Foundation Fellowship : 1 of 10 students (internationally) awarded a scholarship to cover college tuition. Based on an open written test and interview round by Indian Administrative Service Officers.

- IIIT-H Dean's Merit List 2021 and 2022 : For ranking in the top 15% of class in my first and second year

- IIIT-H Dean's List 1 2023 and 2024: For ranking in the top 5% of class in my third and fourth years

- IIIT-H Research Award 2024 : 1 of 2 B.Tech CSE students to be recognised for producing quality research.

- Coordinator of the IIIT Music Club(2021-2023), Quiz Club(2020-2022) and Debate Society(2021-2023). Handled finances (upto 2 lakhs), logistics and marketing and for multiple events a year.