

Anisha Jain

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EDUCATION

Carnegie Mellon University – Robotics Institute, School of Computer Science

Pittsburgh, PA

Master of Science in Computer Vision (MSCV) - GPA 4.26/4.0

Dec 2024

Relevant Coursework: 3D Vision, Learning-based Image Synthesis, Reinforcement Learning
Visual Learning and Recognition

National Institute of Technology (NIT), Warangal

Warangal, India

Bachelor of Technology, Computer Science and Engineering - GPA 9.06/10

May 2021

Institute Merit Scholarship Recipient (for all academic years)

SKILLS

Programming Languages – Python, C, C++, C#, Java

Frameworks – SQL, Numpy, Pandas, PyTorch, TensorFlow, OpenCV, Pillow, Scikit-Learn, .NET, Spark, Apache PySpark

Tools – CUDA, Git, Docker, Linux, Blender, Android, AWS

EXPERIENCE

Zoox

Foster City, CA

Computer Vision Intern

May 2024 - Aug 2024

- Enhance LiDAR geometric data with semantics from vision to build robust and reliable maps, hedging against world changes
- Decreased localizer failures, resulting in fewer NoGo trajectories in production [Patent pending]

Meta Reality Labs

Pittsburgh, PA

Research Collaborator (Capstone Project) [[website](#)]

Dec 2023 - Present

(Advisor: [Prof Laszlo A. Jeni](#), CUBE Lab & [Michael Zollhoefer](#), Meta Reality Labs)

- Online reconstruction of dynamic non-rigid scenes from monocular RGB-D videos using 3D Gaussian Splatting
- Implemented a novel deformation module to disentangle rigid and non-rigid motion for progressive reconstruction

Microsoft (R&D) Pvt Ltd.

Hyderabad, India

Software Engineer

Jun 2021 - Jul 2023

- Slashed ML model iteration for spam/phish detection from a month to under 2 hours, boosting threat response
- Streamlined feature extraction, optimizing analysis of 10 billion emails daily for a more efficient email filter
- Innovated end-to-end process for assessing novel features' impact on model performance in Apache Spark

Google

Remote

Software Product Sprint

Jul 2020 - Sep 2020

- Collaborated with a team of 4 to design, develop, and launch a movie and book recommendation engine
- Applied a matrix factorization model with collaborative filtering and content embedding for effective training

Indian Institute of Science - Computational Intelligence Lab

Bengaluru, India

Research Intern

May 2018 - Jun 2019

(Advisor: [Dr Amarjot Singh](#), Founder & CEO, SkyLark Labs, & [Dr Onkar](#), IISc)

- Achieved an 87.8% accuracy in detecting suspicious activities by implementing SH-PAF Network to estimate pose for humans, whose output is further fed to 3D ResNext to capture the motion of an individual
- Addressed critical research gap by curating dataset of 2400+ videos of individuals in loosely fitted attire
- Co-authored and published a research paper at ICCVW

PUBLICATIONS

A. Singh*, A. Kumar* and A. Jain*, "[Bayesian Gait-Based Gender Identification \(BGGI\) Network on Individuals Wearing Loosely Fitted Clothing](#)," 2019 IEEE/CVF International Conference on Computer Vision Workshop (ICCVW), Seoul, Korea (South), 2019, pp. 1828-1835, doi: 10.1109/ICCVW.2019.00227 (*indicates equal contribution)

PROJECTS

GaussCraft: Language Driven Segmentation and Editing in 3D Using Gaussian Splatting [[poster](#)]

Feb 2024

- Distilled high-quality object-centric vision-language features into 3D Gaussians to model scene appearance
- Empowers users to perform scene decomposition and appearance editing using text queries

GIF-Tune: One-Shot Tuning for Continuous Text-to-GIF Synthesis [[website](#)]

Feb 2024

- One-shot learning using inflated Text-2-Image Diffusion models ensuring temporal continuity and depth consistency
- Utilized spatial transformer architecture to facilitate continuous motion learning within the model

Unsupervised Reinforcement Learning across multiple environments [[arxiv](#)]

Oct 2023

- Boosted exploration efficiency by 40% by integrating curiosity-driven exploration and visitation entropy objectives, enhancing RL agent versatility