Amogh Tiwari

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EDUCATION

INRIA Center of the University of Grenoble Alpes

Grenoble, France

Ph.D. in Computer Science (Specialization: Robotic Vision).

Nov 2024 - Ongoing

International Institute of Information Technology, Hyderabad (IIIT-H)

Hyderabad, India

B. Tech (Hons.) + M.S. by Research in Computer Science and Engineering (CGPA: 8.11/10.00). Aug 2018 - Jul 2024

Publications

- ConVol-E: Continuous Volumetric Embeddings for Human-Centric Dense Correspondence Estimation
 Amogh Tiwari, Pranav Manu, Nakul Rathore, Astitva Srivastava, Avinash Sharma
 Fifth Workshop on Image Matching: Local Features and Beyond at IEEE Conference on Computer Vision and Pattern Recognition (CVPRw), 2023.
- Enhanced Spatio-Temporal Context for Temporally Consistent Robust 3D Human Motion Recovery from Monocular Videos

Sushovan Chanda, **Amogh Tiwari**, Lokender Tiwari, Brojeshwar Bhowmick, Avinash Sharma, Hrishav Barua

Arxiv, 2023.

• Ground then Navigate: Language-guided Navigation in Dynamic Scenes
Kanishk Jain, Varun Chhangani, Amogh Tiwari, K. Madhava Krishna, Vineet Gandhi
IEEE International Conference on Robotics and Automation (ICRA), 2023.

RESEARCH EXPERIENCE

Doctoral Researcher

Nov 2024 - Ongoing

INRIA Center of the University of Grenoble Alpes (Mentors: Pia Bideau, Karteek Alahari)

 $Grenoble,\ France$

• Working on hand-pose estimation for object grasping and manipulation.

Student Researcher

May 2020 – Jul 2024

Center for Visual Information Technology (CVIT), IIIT-H (Mentor: Avinash Sharma)

Hyderabad, India

- Thesis Project: Worked on 3D Human Pose, Shape and Correspondence Estimation.
- Additional Projects: Appearance Agnostic 6-DoF Object Pose Estimation; Human Motion Capture using Event Cameras.

Research Intern Feb 2023 – Sep 2023

TCS Research (Mentors: Lokender Tiwari, Brojeshwar Bhowmick)

Kolkata, India (Remote)

• Worked on Temporally Consistent 3D Human Pose and Shape Estimation.

Computer Vision Intern

May 2022 - Aug 2022

Spatial Guide (Mentors: Akhil Raja and Yagna Narayana A.)

Hyderabad, India

• Worked on in-the-wild 6-DoF Object Pose Estimation.

Student Researcher

Jan 2022 – Sep 2022

Center for Visual Information Technology (CVIT), IIIT-H (Mentor: Vineet Gandhi)

Hyderabad, India

• Worked on Visual Grounding for Autonomous Navigation (led to ICRA 2023 publication).

Student Trainee

May 2021 – Jul 2021

Center for Artificial Intelligence and Robotics (CAIR) (Mentor: Arshad Jamal)

Bengaluru, India (Remote)

• Developed a Visual Question Answering (VQA) model integrated with Robot Operating System (ROS).

TEACHING EXPERIENCE

- Teaching Assistant for Computer Vision (Spring '23) and Computer Systems Organization (Spring '22) courses at IIIT-H. (Responsibilities: Conducting tutorials, creating & evaluating assignments, mentoring course projects).
- Practical sessions at 3D Vision Summer School (3DVSS) 2022, 2023, 2024 organized by IIIT Hyderabad.
- Lab session: Digital Image Processing using Python at Samsung Research Institute, Bangalore. [Notes].
- Tutorial on LaTex as part of the Computing Tools course at IIIT-H. [Notes].

Volunteering and Extra-Curricular

- Reviewer: ICVGIP 2022, 2023 2024.
- Coordinator: *E-Cell, IIIT Hyderabad*. Co-led a team of around 50 members.
- Sports: Member of IIIT-H basketball team; Frequent participant at 10K races.