Chaitanya Patel

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EDUCATION

Stanford University   4.1/4
PhD Student in Computer Science   Sept 2021 – Present
Advisors: Ehsan Adeli and Juan Carlos Niebles

IIIT-Hyderabad, India   **Batch Rank 1, 9.85/10**
Bachelor of Technology (with Honours) in Computer Science and Engineering   Aug 2015 – May 2019

EXPERIENCE

Stanford University   Present
PhD student   Stanford, USA
> Advised by Ehsan Adeli and Juan Carlos Niebles.
>
> Topics: Human activity understanding from videos, 3D human motion from ego videos

Meta Reality Lab   Jun 2023 – Sept 2023
Research Scientist Intern, mentored by Shih-En Wei and Jason Saragih   Pittsburgh, USA
> Worked on fast registration of photorealistic 3D avatars of new users to infrared images of VR headset.
>
> Our work was accepted at ECCV 2024. – Project Page

Google Research India   Jan 2020 – Sept 2021
Pre-doctoral Researcher (Brain Resident), mentored by Varun Gulshan   Bangalore, India
> Worked on Self-supervised learning methods to leverage large amount of satellite imagery data to improve downstream ML remote sensing tasks like land-cover mapping, riverbed segmentation.

RVH lab, Max Planck Institute for Informatics   May 2019 – Nov 2019
Research Intern, mentored by Gerard Pons-Moll   Saarbruecken, Garmany
> Developed a fast data-driven garment model which is realistic, differentiable and easy to animate. Simulated dataset of real 3D garments on people using physics-based simulation.
>
> Our work *TailorNet* was accepted for **Oral** presentation at CVPR 2020. – Project Page

CVIT, IIIT Hyderabad   May 2017 – Apr 2019
Honours Research Student, mentored by Avinash Sharma   Hyderabad, India
> Worked on textured 3D reconstruction using calibrated system of Microsoft Kinect sensors. – Link
>
> Worked on deep learning methods for real-time 3D reconstruction of human body from single image.

PUBLICATIONS

1. AdaVid: Adaptive Video-Language Pretraining. **Chaitanya Patel**, Ehsan Adeli, Juan Carlos Niebles. — in submission

2. Fast Registration of Photorealistic Avatars for VR Facial Animation. **Chaitanya Patel**, Shaojie Bai, Te-Li Wang, Jason Saragih, Shih-En Wei. ECCV 2024 — Project Page

3. Tailornet: Predicting Clothing in 3D as a Function of Human Pose, Shape and Garment Style. **Chaitanya Patel***, Zhouyingcheng Liao*, Gerard Pons-Moll. CVPR 2020 **ORAL** — Project Page

4. HumanMeshNet: Polygonal Mesh Recovery of Humans. Abbhinav Venkat, **Chaitanya Patel**, Yudhik Agrawal, Avinash Sharma. ICCV Workshop 3DRW 2019 — Project Page

5. Evaluating Self and Semi-Supervised Methods for Remote Sensing Segmentation Tasks. **Chaitanya Patel***, Shashank Sharma*, Varun Gulshan. — ArXiv

* Equal Contribution

Teaching

Stanford	Deep Learning for Computer Vision (cs231n), Probabilistic Graphical Models (cs228), Computational Logic (cs157)
IIIT-Hyderabad	Computer Programming, Data Structures, Statistical Methods in AI, Computer Vision

Relevant Courses

Machine Learning	Deep Generative Models (cs236), Probabilistic Graphical Models (cs228), Convex Optimization (ee364a), ML under Distribution Shift (cs329d)
Vision & Graphics	Deep Learning for Computer Vision (cs231n), Graphics in the Era of AI (cs348i), Digital Image Processing, Computer Graphics
Other	Machine Learning with Graphs (cs224w), NLP with Deep Learning (cs224n)

Achievements

- Conference travel grant by Google (CVPR 2020) and Meta (ECCV 2024).
- Institute and Program Gold Medal of IIIT-Hyderabad – 1st Rank in the batch with GPA 9.85 / 10 .
- Dean's List 1 at IIIT-Hyderabad – top 5% in all semesters of Bachelors.
- Rank 34 in ACM ICPC 2018 India online round.
- Rank 56 in JEE Mains 2015 among 1.3 million students.
- Rank 1 in Gujarat State Education Board High School Exam among 80k students.

Technical Skills

Languages: Python, C/C++, Matlab, Bash, HTML/CSS, JavaScript
Libraries: PyTorch, TensorFlow, Keras, Matplotlib
Frameworks & Tools: Git, LaTeX, OpenGL, WebGL, Blender, Meshlab, Django

Algorithmic Coding

- **ACM ICPC**: Rank 84 in India Regionals and Rank 34 in India Online round.
- **Google Kickstart**: World Rank 82 in Round-G 2017 and World Rank 98 in Round-C 2018.
- **Codechef** 5-star profile and **Codeforces** Expert profile with max rating of 1844.