Shehreen Azad

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Education

University of Central Florida *Aug'23 – Dec'26 (Expected)*
Doctor of Philosophy, Computer Science. Advisor: Dr Yogesh Singh Rawat. **GPA:** 3.91/4.0
Disseration Committee: Dr Yogesh Singh Rawat, Dr Mubarak Shah, Dr Chen Chen, Dr Soheil Sabri

Master of Science, Computer Science. *Aug'22 – July'23*

Experience

Graduate Research Assistant *Aug'23 – Present*
Center for Research in Computer Vision, UCF. Advisor: Dr Yogesh Singh Rawat
- Video understanding and multimodal reasoning

Major Research Projects

Video Understanding and Multimodal Reasoning *Jan'23 – Present*
- Streaming long-form video understanding (*Ongoing*): Developing a memory-augmented, task-agnostic multimodal framework for efficient temporal reasoning and on-time responses.
- Hierarchical Q-Former for long-form video understanding (**CVPR'25**): Proposed a memory-augmented, task-aware multimodal framework to improve computational efficiency and temporal modeling.
- Disentangling Q-Former for activity-biometrics (**ICCV'25 Highlight**) : Designed a multimodal framework for activity-aware person identification through language-guided motion-centric temporal modeling.
- Activity-Biometrics: Person identification from daily activities (**CVPR'24**): Introduced the novel task of activity-aware person identification by linking actions to biometric traits through motion-centric temporal modeling.
- Benchmarking visual perception in Multimodal Large Language Models (MLLMs): Proposed diagnostic benchmarks to evaluate: Depth and height perception (**CVPRW'25**), Compositional reasoning (**CVPRW'24**), and Distribution shifts (**CVPRW'24**) in MLLMs.

Funded Projects

1. **Biometric Recognition and Identification at Altitude and Range (BRIAR) by IARPA.**
   Advisors: Dr Mubarak Shah, Dr Yogesh Singh Rawat *Jan'23– June'24*
   - Served as the team lead for the activity-aware recognition substream of the program.
   - Secured 2nd rank out of 7 teams in activity-aware recognition.
2. **ART: From Research to Impact, Building the Translational Capacity of UCF's Innovation Ecosystem by NSF.** Advisor: Dr Yogesh Singh Rawat *Aug'24- Present*
   - Leading the development of a multimodal reasoning framework for streaming videos.
   - Completed "NSF Innovation Corps (I-Corps™) - Lean Startup at UCF" training as part of the program.

Patent

1. **Shehreen Azad**, Yogesh S Rawat. "Activity-Biometrics: Person Identification from Daily Activities." US Patent Application No.: 63/685,014, 2024, Reference no.: 2024-117-01, (Pending).

Additional Credentials

1. **Languages, Frameworks:** C/C++, Python, PyTorch, Keras, TensorFlow, OpenCV, Scikit. **Tools:** Git, VS Code, Linux, LaTeX
2. **Awards and Honors:** UCF CS Ranking Incentive Award ('24, '25); ICCV Broadening Participation Award ('25); CVPR Diversity, Equity and Inclusion Award ('24); UCF Presentation Fellowship ('24, '25); UCF ORCGS Doctoral Fellowship ('23).
3. **Reviewer:** CVPR'25, ICCV'25, NeurIPS'25, BMVC'25, CVPR MMFM Workshop'24,'25, ICPR'24.
4. **Teaching Assistant:** CAP 5725: Computer Graphics *(Fall'22)*, CAP 6721: Ray Tracing *(Spring'23)*.
5. **Others:** Treasurer of Bangladesh Student Association at UCF (*'23-'24*)