

## EDUCATION

**University of Arkansas**, Fayetteville, AR

*Ph.D. in Computer Engineering*

Jan 2021 - May 2025

- PhD Thesis Title: “Vision-Based Multimodal Approaches in Human Behavior Analysis: Bridging Group Activity Recognition and Healthcare Monitoring” (Advisor: Asst. Prof. Khoa LUU)

**Purdue University**, Indianapolis, IN

*M.S. in Computer Engineering*

Aug. 2018 - May 2020

- Masters Thesis Title: “Squeeze-and-Excitation SqueezeNext: An Efficient DNN for Hardware Deployment” [CCWC’20][MIC’20] (Advisor: Prof. Mohamed El-Sharkawy)

## RESEARCH EXPERIENCE

**Computer Vision and Image Understanding Lab**, Fayetteville, AR

*Graduate Research Assistant*

Jan 2021 - Present

- Conducting research on Group Activity Recognition [CVPRW’23, Under review for IEEE Access journal, WACV’25], Visual Temporal Modelling [Sensors’24 Journal], Vision-Language Models [MVA’24 Journal, Under review for NeuroComputing Journal] and currently working on Foundational Models [Under review for IJCV Journal] using TikTok data to help tobacco content moderation.

**IoT Collaboratory**, Indianapolis, IN

*Graduate Research Assistant*

Jan. 2019 - May 2020

- Enhanced accuracy and training speed for Neural Network Architectures using the PyTorch Framework, implemented on NXP iMX-RT1060 EVKB and NXP BlueBox. Developed ADAS systems based on these enhancements and contributed to Radar and Lidar sensors integration and simulation.

**Defence Research Development Laboratory**, Hyderabad, India

*Instrumentation Engineering Intern*

May 2017 - July 2017

- Project titled “Measurement of C-type Thermocouple Using K-type Signal Conditioning Unit” is done on MATLAB by using the standard thermocouple datasheet to obtain the respective thermocouple co-efficients, which are helpful for the conversion of one thermocouple output to other. Performed Static Analysis, Unit testing and Integration testing of this software.

## SELECTED PUBLICATION

### Journal Articles

- **Chappa, Naga Venkata Sai Raviteja**, Page Daniel Dobbs, and Khoa Luu. Public health advocacy dataset: A dataset of tobacco usage videos from social media. *International Journal of Computer Vision*, 2024. **Under review**
- **Chappa, Naga VS Raviteja**, Page Daniel Dobbs, Bhiksha Raj, and Khoa Luu. Flaash: Flow-attention adaptive semantic hierarchical fusion for multi-modal tobacco content analysis. *Neurocomputing*, 2024. **Under review**
- **Chappa, Naga Venkata Sai Raviteja**, Pha Nguyen, Thi Hoang Ngan Le, Page Daniel Dobbs, and Khoa Luu. Hatt-flow: Hierarchical attention-flow mechanism for group-activity scene graph generation in videos. *Sensors*, 24(11):3372, 2024
- **Chappa, Naga VS**, Pha Nguyen, Page Daniel Dobbs, and Khoa Luu. React: Recognize every action everywhere all at once. *Machine Vision and Applications*, 35(4):102, 2024
- **Chappa, Naga VS**, Pha Nguyen, A. N., H.-S. S., Xin Li, P. D., and Khoa Luu. SoGAR: Self-supervised Spatiotemporal Attention-based Social Group Activity Recognition. *IEEE Access*, 2024. **Under review**
- Ibsa Jalata, **Chappa, Naga Venkata Sai Raviteja**, Thanh-Dat Truong, Pierce Helton, Chase Rainwater, and Khoa Luu. Eqadap: Equipollent domain adaptation approach to image deblurring. *IEEE Access*, 10:93203–93211, 2022

### Conference Papers

- **Chappa, Naga Venkata Sai Raviteja** and Khoa Luu. Ligar: Lidar-guided hierarchical transformer for multi-modal group activity recognition. In *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2025
- **Chappa, Naga VS Raviteja**, Charlotte McCormick, Susana Rodriguez Gongora, Page Daniel Dobbs, and Khoa Luu. Advanced deep learning techniques for tobacco usage assessment in tiktok videos. In *2024 IEEE Green Technologies Conference (GreenTech)*, pages 162–163. IEEE, 2024
- **Chappa, Naga VS**, Pha Nguyen, Alexander Nelson, H.-S. S., Xin Li, Page Dobbs, and Khoa Luu. SPARTAN: Spatiotemporal Transformers Approach to Self-supervised Group Action Recognition. In *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*, 2023. **3<sup>rd</sup> Place Award**

- Thanh-Dat Truong, **Chappa, Ravi Teja NVS**, Xuan-Bac Nguyen, Ngan Le, Ashley PG Dowling, and Khoa Luu. Otadapt: Optimal transport-based approach for unsupervised domain adaptation. In *2022 26th international conference on pattern recognition (ICPR)*, pages 2850–2856. IEEE, 2022
- **Chappa, Ravi Teja NVS** and Mohamed El-Sharkawy. Deployment of se-squeezenext on nxp bluebox 2.0 and nxp i. mx rt1060 mcu. In *2020 IEEE Midwest Industry Conference (MIC)*, volume 1, pages 1–4. IEEE, 2020
- **Chappa, Ravi Teja NVS** and Mohamed El-Sharkawy. Squeeze-and-excitation squeezenext: An efficient dnn for hardware deployment. In *2020 10th Annual Computing and Communication Workshop and Conference (CCWC)*, pages 0691–0697. IEEE, 2020
- **Chappa, Ravi Teja NVS**, Bhaskara Rao Jammu, Maheswari Adimulam, and Maneesh Ayi. Vlsi implementation of ltssm. In *2017 International conference of Electronics, Communication and Aerospace Technology (ICECA)*, volume 1, pages 129–134. IEEE, 2017

## TECHNICAL SKILLS

**Proficient:** Computer Vision, Deep Learning, JavaScript, Algorithms, Python, C/C++,  $\LaTeX$   
**Familiar:** React.js, Node.js, Software Deployment, Embedded Systems, Mobile App Development

## HONORS AND AWARDS

**UARK Doctoral Student Presentation Travel Grant** *June 2023*  
**21<sup>st</sup> Century Research Leadership Award and Fellowship** *Jan 2023, Aug 2022*  
**Cora E. Sanders Memorial Graduate Fellowship** *Jan 2025*  
**Reginald R. “Barney” & Jameson A. Baxter Graduate Fellowship** *Aug 2024, Jan 2024, Aug 2023*  
**Third Prize**, CVSports Workshop at CVPR 2023 *June 2023*

## TEACHING EXPERIENCE

**Computer Architecture** (Instructor: *Prof. David Andrews*)  
*Graduate Teaching Assistant* *Jan. 2022 - May 2022*

**Digital System Design** (Instructor: *Prof. Lauren Christopher*)  
*Graduate Teaching Assistant* *Aug. 2018 - Dec. 2018*

## PROFESSIONAL SERVICES

**Conference Reviewer** at CVPR 2023-2025, ICCV 2023, ECCV 2024, NeurIPS 2024, AAAI 2025, ICLR 2025, WACV 2025  
**Journal Reviewer** for [IEEE Access](#), [Multimedia Tools and Applications](#), [IEEE Transactions on Circuits and Systems for Video Technology](#)  
**Student Member** at Institute of Electrical and Electronics Engineers

## INVITED TALKS

**SPARTAN: Self-supervised Spatiotemporal Transformers Approach to Group Activity Recognition**, [IEEE/CVF CVPR Workshop - CVSports](#) *June 2023*