SYED TALAL WASIM

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EDUCATION

University of Bonn

Jan 2024 - Ongoing

Ph.D. in Computer Vision

Bonn, Germany

- Supervisor: Professor Dr. Juergen Gall
- Working on Long-Term Multimodal Video Understanding

Universidad Autónoma de Madrid

Sep 2019 - Jun 2021

MS Image Processing and Computer Vision

Madrid, Spain

- Supervisor: Dr. Mathieu Salzmann (CVLAB) at EPFL
- MS Thesis: Automatic Typography Analysis on Figurative Content
- Funded by the Erasmus Mundus Joint Masters Degree (EMJMD) Scholarship Program

Habib University

Sep 2015 - Jun 2019

BS Electrical Engineering - Minor in Computer Science

- Supervisor: Professor Dr. Abdul Basit Memon
- BS Thesis: SquadBot: A Multi-Agent Robotics Teaching and Research Platform
- Graduated with 1st position in program

Stanford University

Jun 2017 - Aug 2017

Summer International Honors Program

Stanford, USA

Karachi, Pakistan

• Coursework: Technology Entrepreneurship, Leading Trends in IT, Smart Cities & Communities

WORK EXPERIENCE

Intelligent Visual Analytics Lab, Mohamed Bin Zayed University of AI

Apr 2022 - Dec 2023

Associate Researcher

Abu Dhabi, UAE

- Supervisor: Professor Dr. Salman Khan
- Focused on multimodal video representation learning and out-of-distribution generalization

Computer Vision Lab, EPFL

Feb 2021 - July 2021 Lausanne, Switzerland

MS Thesis Intern

• Supervisor: Dr. Mathieu Salzmann

• Focused on typography analysis using Transformers for both RGB and Vector images

Empathic Computing Lab, University of South Australia

Jul 2020 - Mar 2021

Research Intern

Remote

- Supervisor: Professor Dr. Mark Billinghurst
- Focused on Multimodal Emotion Recognition using Facial Micro-Expressions
- Including modalities such as Video, EEG and GSR

SKILLS

Research Areas: Video Understanding, Large Language Models, Vision-Language Models, Efficient Neural

Architectures, Multimodal Learning, Representation Learning

Programming: Python (Advanced), C/C++ (basic), C# (basic), Java (Basic)

Common ML Tools: Pandas, Numpy, Scikit-Learn, Tensorflow/Keras, OpenCV, Pytorch

AR/VR and Game Engines: Unity 3D, HoloLens 1

Languages: English: C2 (Expert), Urdu: Native

PUBLICATIONS

- 1. **S. T. Wasim**, H. Suleman, O. Zatsarynna, M. Naseer, and J. Gall, "MixANT: Observation-dependent memory propagation for stochastic dense action anticipation," in *ICCV*, 2025
- 2. J. Yi*, S. T. Wasim*, Y. Luo*, M. Naseer, and J. Gall, "Video-Panda: Parameter-efficient alignment for encoder-free video-language models," in *CVPR*, 2025
- 3. A. Shaker, S. T. Wasim, S. Khan, J. Gall, and F. Khan, "Groupmamba: Parameter-efficient and accurate group visual state space model," in *CVPR*, 2025
- 4. D. Velayudhan, A. Ahmed, M. Alansari, N. Gour, A. Behouch, T. Hassan, S. T. Wasim, N. Maalej, M. Naseer, J. Gall, M. Bennamoun, E. Damiani, and N. Werghi, "STING-BEE: Towards vision-language model for real-world x-ray baggage security inspection," in *CVPR*, 2025
- 5. A. Shaker, S. T. Wasim, M. Danelljan, S. Khan, M.-H. Yang, and F. Khan, "Efficient video object segmentation via modulated cross-attention memory," in WACV, 2025
- 6. H. Suleman*, S. T. Wasim*, M. Naseer, and J. Gall, "Distillation-free scaling of large ssms for images and videos," arxiv preprint, arxiv:2409.11867, 2024
- 7. S. T. Wasim, M. Naseer, S. Khan, M.-H. Yang, and F. Khan, "VideoGrounding-DINO: Towards open-vocabulary spatio-temporal video grounding," in *CVPR*, 2024
- 8. M. Z. Yousuf, S. T. Wasim, S. N. Hasany, and M. Farhan, "AR-VPT: Simple auto-regressive prompts for adapting frozen vits to videos," in VISAPP, 2024
- 9. **S. T. Wasim**, K. H. Soboka, A. Mahmoud, S. Khan, D. Brooks, and G.-Y. Wei, "Hardware resilience properties of text-guided image classifiers," in *NeurIPS*, 2023
- 10. S. T. Wasim*, M. U. Khattak*, M. Naseer, S. Khan, M. Shah, and F. Khan, "Video-FocalNets: Spatio-temporal focal modulation for video action recognition," in *ICCV*, 2023
- 11. M. U. Khattak*, S. T. Wasim*, M. Naseer, S. Khan, M.-H. Yang, and F. S. Khan, "Self-regulating prompts: Foundational model adaptation without forgetting," in *ICCV*, 2023
- 12. **S. T. Wasim**, M. Naseer, S. Khan, F. Khan, and M. Shah, "Vita-CLIP: Video and text adaptive clip via multimodal prompting," in *CVPR*, 2023
- 13. S. T. Wasim, R. Collaud, L. Défayes, N. Henchoz, M. Salzmann, and D. Ribes, "Toward automatic typography analysis: serif classification and font similarities," *Journal of Data Mining in Digital Humanities* (*JDMDH*), 2023
- N. Saffaryazdi, S. T. Wasim, K. Dileep, A. F. Nia, S. Nanayakkara, E. Broadbent, and M. Billinghurst, "Using facial micro-expressions in combination with eeg and physiological signals for emotion recognition," Frontiers in Psychology, 2022
- 15. **S. T. Wasim**, S. N. Hasany, K. Abbasi, H. Feroz, A. A. Ahmed, M. H. Shaikh, and M. Farhan, "Sim-to-real transfer for object detection and localization on animals," in *CV4Animals CVPR Workshop*, 2021

ACADEMIC SERVICES

- Conference/Journal Reviewers: CVPR, ICCV, ECCV, WACV, ACCV, NeurIPS, ICLR, ICML, AAAI, TPAMI, TNNLS, TIP, TMLR, IJCV, Pattern Recognition
- Outstanding Reviewer at NeurIPS

HONORS AND AWARDS

Ph.D.

- Compute Award: Co-authored Gauss AI Compute grant with Professor Dr. Juergen Gall for 54.0 million GPU compute hours on the topic of Holistic Multi-modal Egocentric Video Forecasting.
- Compute Award: Co-authored EuroHPC AI Intensive access grant with Professor Dr. Juergen Gall for 1.6 million GPU compute hours to scale our CVPR publication on Encoder-Free Video Lanuguage Models.
- Compute Award: Co-authored EuroHPC Benchmark and Regular access grants with Professor Dr. Juergen Gall for 3.0 million GPU compute hours on the topic of Large-Scale Open-Vocabulary Video Understanding and Anticipation.
- Compute Award: Co-authored EuroHPC Benchmark and Regular access grants with Professor Dr. Ernesto Damiani for 2.5 million GPU compute hours on the topic of Large-Scale Robust Vision Language Models.
- Winter School Grant: Full funding to attend MENA Winter School on Machine Learning 2025
- Winter School Grant: Full funding to attend ELLIS Winter School on Foundational Models 2024

Masters

- Erasmus Mundus Scholarship: Two year fully funded scholarship for MS studies
- Summer School Grant: Full funding to attend ETH Zurich Robotics Summer School and Symposium 2021

Bachelors

- Dean's Medal: For graduating with the highest CGPA in Electrical Engineering program
- Best Capstone Award: Awarded the best capstone project award in the Electrical Engineering program
- Summer Program Scholarship: Among 8 students selected for funded International Honors Program at Stanford University
- President's Honor List: For maintaining position on Dean's Honor List in consecutive semesters
- Dean's Honor List: The top 10% students in the program each semester
- High Academic Achievement Scholarship: Additional 10% Scholarship for the Top 3 students in the school each semester
- Merit Scholarship: Awarded 65% scholarship for 4 years

High School

• Intel ISEF: Fully funded opportunity to represent Pakistan at the Intel International Science and Engineering Fair (ISEF), 2014 in LA, California