

Tanveer Hannan

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Research Interest

- Machine Learning 📖 Deep Learning, Multi-Modal Learning, Self-Supervised Learning, Unsupervised Clustering, Large Language Modeling, Natural Language Processing.
- Computer Vision 📖 Video Understanding, Vision-Language Modeling, Long-Range Video Modeling, Egocentric Vision, Reliable AI, Multi-Object Tracking.

Education

- 2022 – Present 📖 **Ph.D. in Computer Science**, 3rd Year, LMU Munich
Advisor: [Thomas Seidl](#), [Gedas Bertasius](#)
Teaching: *Connecting Language to Vision*, *Deep learning and Artificial Intelligence*, *Knowledge Discovery and Data Mining*
- 2019 – 2021 📖 **M.Sc. in Data Science**
LMU Munich CGPA 1.06/4.00 (best 1.0 out of 4.0)
- 2014 – 2018 📖 **B.Sc. in Computer Science and Engineering**
Bangladesh University of Engineering and Technology
CGPA 3.79/4.00 (3.93 final 2 years)

Experience







- Jul 24 – Dec 24 📖 Research Scientist Intern, [Huawei Research Center](#), Munich, Germany
Reliability of Large Vision Language Models
- Jul 21 – Dec 21 📖 Research Intern, [Hensoldt Analytics](#), Munich, Germany
Computer Vision, Video Segmentation & Tracking
- Oct 20 – Apr 21 📖 Research Intern, [Siemens](#), Munich, Germany
Reinforcement Learning, Optimization
- Nov 18 – Aug 19 📖 Software Engineer [Helical Inc.](#), Dhaka, Bangladesh

Research Publications





- 8 ReVisionLLM: Recursive Vision-Language Model for Temporal Grounding in Hour-Long Videos
T Hannan, M. Islam, J. Gu, T Seidl, G. Bertasius
In *ArXiv* 2024. [[pdf](#)]
- 7 RGNet: A Unified Retrieval and Grounding Network for Long Videos
T Hannan, M. Islam, T Seidl, G. Bertasius
In *ECCV* 2024. [[pdf](#)]
- 6 GRAtt-VIS: Gated Residual Attention for Auto Rectifying Video Instance Segmentation
T Hannan*, R Koner*, M Bernhard, S Shit, B Menze, V Tresp, M Schubert, T Seidl
In *ICPR* 2024. [[pdf](#)]
- 5 Context Matters: Leveraging Spatiotemporal Metadata for Semi-Supervised Learning on Remote Sensing Images
M Bernhard, **T Hannan**, N Strauß, M Schubert
In *ICPR* 2024. [[pdf](#)]

- 4 InstanceFormer: An Online Video Instance Segmentation Framework
R Koner*, **T Hannan***, S Shit, S Sharifzadeh, M Schubert, T Seidl, V Tresp
In *The Conference on Artificial Intelligence (AAAI) 2023*. [pdf]
- 3 Box Supervised Video Segmentation Proposal Network
T Hannan*, R Koner*, J Kobold, M Schubert
In *Irish Machine Vision and Image Processing Conference (IMVIP) 2022*. [pdf]
- 2 Prediction of Soft Proton Intensities in the Near-Earth Space Using Machine Learning
E. Kronberg, **T Hannan**, et al.
In *The Astrophysical Journal 921 (1)*. [pdf]
- 1 COVID-DenseNet: A Deep Learning Architecture to Detect COVID-19 from Chest Radiology Images
M. Islam*, **T. Hannan***, L. Sarker, Z. Ahmed
In *International Conference on Data Science and Applications (ICDSA) 2022*. [pdf]

Selected Projects






- H-Attention**  Designing a Hierarchical Attention based Transformer network for End-to-end Object Detection.
- RL-Optimizer**  Customized Reinforcement Learning Environments to optimize the reorder point to minimize both inventory and stockout costs.
- Adversial Attack**  GAN Based Image Steganography is designed with Adversarial Attacks to fool steganographic image classifier.
- BenglaAI**  A CNN-based model for Bengali Handwritten Digit Recognition.
- UniShare**  An academic resource-sharing platform developed using PHP, CodeIgniter framework, MySQL, JavaScript, HTML, CSS, and XAMPP server.
- PoliceBox**  An interactive server-client system developed using Java Swing, JavaFX, MySQL, and Socket Programming to manage services provided by the police efficiently.

Skills

- ML tools**  PyTorch, TensorFlow, Keras, Jupyter, Distributed training.
- Coding**  Python, Java, C, C++, Java HTML, XML, PHP, JavaScript, 80x86 Assembly.
- Soft Dev**  Oracle, MySQL, Spring Framework, HTML, CSS.
- Misc.**  Lex, Yacc, Shell Script, LaTeX, Git.

Miscellaneous Experience

Awards and Honors

- 2018  **9th place.** *Bengali Handwritten Digit Recognition Challenge*, Kaggle Competition 2018.
- 2016  **Semi-finalist** in University Debate Championship
- 2014-16  **University Merit List**, Bangladesh University of Engineering and Technology.
- 2014  **Finalist** in the 4th Stamford National Debate Championship
- 2012  **Champion** of Inter-School Debate Competition