Tanveer Hannan

hannan@dbs.ifi.lmu.de
Webpage LinkedIn Google Scholar GitHub

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, Video Retrieval, Autonomous Driving, Reliable AI, Multi-Object Tracking.

Education

2022 – Present — **Ph.D. in Computer Science**, 3*rd* 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
Text-to-Video Retrieval for Autonomous Driving, Reliable AI

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.
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

Reviewer

2018	Conference: CVPR, ECCV, NeurIPS, ICDE, ICDM