

Md Zahid Hasan

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EDUCATION

Ph.D. in Electrical Engineering, Iowa State University, Ames, IA **2021- Present**

Major: Electrical Engineering (GPA: 3.75/4.0)

Major Professor: Dr. Soumik Sarkar

Bachelor of Science, Bangladesh University of Engineering & Technology, Bangladesh **2014 -2018**

Major: Electrical and Electronic Engineering (GPA: 3.52/4.0)

Major Professor: Dr. Shamim Reza

PROFESSIONAL SUMMARY

- Developed background in NLP, CV, video understanding models for downstream real-world applications
- Worked in a team and collaborated with peers to achieve optimized goals
- Contributed in building DL models, familiar with PyTorch/Tensorflow frameworks

WORK EXPERIENCES

Graduate Research Assistant **Summer 2021 - Present**

Self-Aware Complex System Lab

Department of Mechanical Engineering, Iowa State University, Ames, IA

- Designed and deployed Computer vision models on naturalistic driving video datasets
- Investigated drivers' behaviors and cognitive status from DL models
- Evaluated Vision-language models for driver activity recognition
- Coding: Python and packages; Framework skills: PyTorch, Tensorflow, OpenCV

Undergraduate Research Assistant **Fall 2017 – Fall 2018**

Department of Electrical & Electronic Engineering, Bangladesh University of Engineering & Tech.

- Developed an orthogonal system based on Generalized Integrator for Electric power system
- Investigated DC offsets and noisy signals from the single-phase grid voltage in power system
- Evaluated performance over conventional Phase Locked Loops for estimating single-phase grid voltage parameters in Electric power system

TEACHING EXPERIENCES

Graduate Teaching Assistant **Spring 2021 – Summer 2021**

Department of Electrical & Computer Engineering, Iowa State University, Ames, IA

- Instructor of Semiconductor Materials and Devices (EE332) ~50 undergraduate students
- Instructor of Communication System II Lab (EE423) ~20 undergraduate students
- Prepared lectures and class activities focusing on building models on MATLAB Simulink
- Instructor of Communication System II (EE422) ~20 undergraduate students

TECHNICAL SKILLS

- **Programming Languages and Packages**
 - C, C++, Python, PyTorch, Tensorflow, MATLAB, OpenCV, Hugging Face
- **Computer-Aided Design/Engineering Packages**
 - AutoCAD, SolidWorks, PSpice
- **Miscellaneous**
 - VScode, JupyterLab, LaTeX, GitHub, Linux, Microsoft Office, MacOS

PUBLICATIONS

Conference Proceedings (Total: 2)

1. **Hasan, Md.Z.**, Joshi, A., Rahman M., Venkatachalapathy, A., Hegde, C., Sharma, A., Sarkar S. (2022). "DriveCLIP: Zero-shot transfer for distracted driving activity understanding using CLIP," Machine Learning for Autonomous Driving Workshop at the 36th Conference on Neural Information Processing Systems (**NeurIPS 2022**), New Orleans, USA, December 3rd 2022.
2. **Hasan, Md.Z.**, Shiam, I.F., Nova, T.T., Reza, Md.S. (2019). "A Modified PLL Based on Second Order Generalized Integrator for Single-Phase Voltage System," International Conference on Electrical, Computer and Communication Engineering (**ECCE**), Cox-Bazar, Bangladesh, February 7-9, 2019.

CONFERENCE PRESENTATIONS

Poster Presentations (Total: 1)

1. **Hasan, Md.Z.**, Joshi, A., Rahman M., Venkatachalapathy, A., Hegde, C., Sharma, A., Sarkar S. (2022). "DriveCLIP: Zero-shot transfer for distracted driving activity understanding using CLIP," Machine Learning for Autonomous Driving Workshop at the 36th Conference on Neural Information Processing Systems (**NeurIPS 2022**), New Orleans, USA, December 3rd 2022.

INVITED TALK

1. Translational AI Center, Department of Mechanical Engineering, **Iowa State University**, Ames, IA (Nov 16th, 2022).
Title of Talk: An overview of Vision-Language models.

PROFESSIONAL MEMBERSHIP & LEADERSHIPS

- Member of Institution of Electrical and Electronics Engineers (IEEE) **2021 - present**
- Member of IEEE-Eta Kappa Nu Chapter, Iowa State University **2021 - present**
- Iowa State student member of Bangladesh Student's Association (BSA)
 - Mentored incoming international students with information and procedures
 - Supervised monthly meetings and goals for the association of 150 student/scholar members