**GRADUATE STUDENTS:**

**Please complete & submit *today*.**

**Computer Science Research Seminar ATTENDANCE FORM**

***ONE FORM PER CS STUDENT***

**Date:** September 11, 2020

**Seminar Title: High Performance Computing System**

**Name of Speaker: Dr. Tanzima Islam**

**Your name: Zebo Xiong**

**Your student-id: A04907051 Your major: Computer Science**

1. Summary of the challenges addressed in the given talk
2. Prediction with small scale of samples/data
3. The performance enhancement
4. Can we build interpretable AI models instead of the black-box models like CNN and LSTM, etc.
5. Can we bild systems to scale the ML models so that they can finish quickly?

1. Summary of proposed solutions to the stated challenges
2. Transfer learning to apply
3. Can we build an off-line model and work with online model and continue study the performance.
4. Compare and get the difference
5. Deep into the ML models and improve those models.
6. The most interesting thing that you learned from this seminar

The machine learning approach to predict the performance in a new application with data provided. But how and what kind of features we are going to test

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**Date:** September 11, 2020

**Seminar Title: Information Theory & Data Compression Research**

**Name of Speaker: Dr. Dan Tamir**

**Your name: Zebo Xiong**

**Your student-id: A04907051 Your major: Computer Science**

1. Summary of the challenges addressed in the given talk
2. NASA spend too much money without a result.
3. Data Compression
4. Image Synthesis
5. Prove compression features and Theoretical Bounds
6. Compressing “Large” (Unbounded) Integer
7. Computation with words and fuzzy logic
8. IP protection and commercialization
9. Summary of proposed solutions to the stated challenges
10. Using the patent.
11. Using the CNN to solve the detection issues.
12. Split the questions into small parts

1. The most interesting thing that you learned from this seminar
2. Detect the boats and items from video
3. Put everything into patent for protection
4. Graphic approach to analysis the detection issue.

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**Computer Science Research Seminar ATTENDANCE FORM**

***ONE FORM PER CS STUDENT***

**Date:** September 11, 2020

**Seminar Title: Multi-task and Multi-modal Learning for Image and Video Understanding**

**Name of Speaker: Dr. Yan Yan**

**Your name: Zebo Xiong**

**Your student-id: A04907051 Your major: Computer Science**

1. Summary of the challenges addressed in the given talk
2. Image and video understanding is hard – if no context information
3. Next breakthrough is the true AI
4. Different levels’ problem
5. Can we train region pose classifiers instead of a global pose classifier?
6. Can we minimize tedious labeling task even if we train multiple region pose classifier?

1. Summary of proposed solutions to the stated challenges
2. Multi-modal / Cross-Modal Learning
3. 360 video / rgocentric (first-person) video understanding
4. Multi-task learning framework for head
5. Head pose estimation
6. FEGA-MTL: Flexiable Graph-guided Multi-task Learning
7. SelectionGAN for the cross-view image generation task

1. The most interesting thing that you learned from this seminar
2. Multi-task learning framework for head
3. First-person and Third-person view

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**Computer Science Research Seminar ATTENDANCE FORM**

***ONE FORM PER CS STUDENT***

**Date:** September 11, 2020

**Seminar Title: Security Research**

**Name of Speaker: Dr. Qijun Gu**

**Your name: Zebo Xiong**

**Your student-id: A04907051 Your major: Computer Science**

1. Summary of the challenges addressed in the given talk
2. Security is a very broad and important area: sensors, embedded system, actuators, network
3. Every sections in the system are noisy
4. How to design the attacks and setup the defense
5. How to attack physical domain remotely and cause problem.
6. Privacy attacks and differencing attacks
7. Summary of proposed solutions to the stated challenges
8. Cyber-Domain defense. Find the security anchor quickly
9. Create new distance verification methods for muti-UAV collision avoidance.

1. The most interesting thing that you learned from this seminar
2. Magnet sensor, camera, GPS, LiDAR security
3. The issues when working with drone
4. Differencing attacks and differential datasets; Privacy protection