

## EDUCATION

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University of Illinois at Urbana-Champaign

December 2020

Computer Engineering, B.S.

GPA: 3.98

### Awards and Honors

- Henry O. Koehler Merit Scholarship 2020
- Daniel W. and Carol A. Dobberpuhl Award<sup>1</sup> 2020
- Omron Electrical Engineering Scholarship<sup>2</sup> 2019, 2020
- Fiddler Innovation Undergraduate Student Fellowship 2019
- Ackmann Family Scholarship<sup>1</sup> 2018

<sup>1</sup>Awarded to one student out of a pool of 1000+, <sup>2</sup>Awarded to two students out of a pool of 1000+

## EXPERIENCE

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### Coordinated Science Laboratory

Jan 2020 to Present

Undergraduate Researcher (Advisor: Prof. Saurabh Gupta)

Champaign, IL

- Designed contrastive learning- and forward prediction-based self-supervised approaches to extract action embeddings from unlabeled egocentric videos for the task of visual navigation.

### Beckman Institute for Advanced Science and Technology

Jan 2019 to Present

Undergraduate Researcher (Advisors: Prof. Diane Beck, Prof. Thomas Huang)

Champaign, IL

- Studied the role of prototypical images in the Places365-CNNs, a family of modern scene recognition models, in comparison with the human visual system.
- Improved the Show and Tell & Bottom-Up and Top-Down Attention image captioning models using Doc2Vec to surpass state-of-the-art baseline results with the Visual Genome dataset.

### National Center for Supercomputing Applications

Jan 2018 to Aug 2020

Undergraduate Researcher (Advisors: Prof. Eliu Huerta, Prof. Zhizhen Zhao)

Champaign, IL

- Designed WaveNet- and ConvNetQuake-based convolutional neural networks for state-of-the-art heart condition prediction based on ECG signals.

### IBM Center for Cognitive Computing Systems Research

May 2019 to Aug 2019

Software Engineering Intern (Advisor: Prof. Sanjay Patel)

Champaign, IL

- Implemented supervised and unsupervised learning algorithms for classification and clustering on radar data.

### ACM – Special Interest Group for Artificial Intelligence

Aug 2018 to Aug 2020

Co-Chair

Champaign, IL

- Created and delivered content using Tensorflow, PyTorch, and Keras to teach beginners the fundamentals of Deep Learning. We are the largest ACM chapter in the nation.

## PUBLICATIONS

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1. **Arjun Gupta**, Zack Shen, and Thomas Huang. Text Embedding Bank for Detailed Image Paragraph Captioning. In Association for the Advancement of Artificial Intelligence (AAAI), 2021 [Student Abstract]
2. Matthew Chang, **Arjun Gupta**, and Saurabh Gupta. Semantic visual navigation by watching YouTube videos. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2020.
3. **Arjun Gupta**, Eliu Huerta, Zhizhen Zhao, and Issam Moussa. Deep Learning for Cardiologist-level Myocardial Infarction Detection in Electrocardiograms. In *European and Medical Biological Engineering Conference (EMBECE)*, 2020.