# Darryl Hannan

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#### Education

## University of North Carolina - Chapel Hill

August 2018 - Present

Third Year PhD Student in Computer Science

Advisor: Mohit Bansal

Villanova University

August 2014 - May 2018

B.S. in Computer Science

Minors: Cognitive Science and Classical Studies

GPA: 3.77

# Research and Work Experience

#### University of North Carolina - Chapel Hill

August 2018 - Present

Research Assistant/NSF Fellow

Research with Dr. Mohit Bansal spanning a variety of subfields in NLP, with an emphasis on multimodal processing and social bias detection/mitigation.

Tencent AI Lab June 2020 - August 2020

NLP Research Intern

Research with Dr. Liwei Wang on improving conversational QA models via dialogue generation techniques.

#### Los Alamos National Laboratory

May 2018 - August 2018

Applied Machine Learning Fellow

Applied the sparse-coding model from the prior summer to language. Interested in exploiting top-down feedback to influence sentence-level representations.

#### Los Alamos National Laboratory

June 2017 - August 2017

Student Research Scientist

Developed a neurologically plausible sparse deep generative autoencoder with Dr. Edward Kim and Dr. Garrett Kenyon.

## Villanova University

**September 2016 - May 2018** 

*Undergraduate Researcher* 

Research in computer vision with Dr. Edward Kim. Worked on a variety of independent projects, intersects with work done at Los Alamos.

TS Partners Inc. June 2013 - June 2017

Junior Java Developer

Ported hundreds of thousands of lines of code from a Delphi System to a web based Java application, and helped maintain this system as it was deployed.

# **Teaching Experience**

#### Villanova University

August 2017 - December 2017

Teaching Assistant for Platform-based Computing

Helped students review course material and complete programming assignments, evaluated and graded student work, and taught a class session.

## **Publications**

- [1] Darryl Hannan, Akshay Jain, and Mohit Bansal. ManyModalQA: Modality Disambiguation and QA over Diverse Inputs. *AAAI*, 2020.
- [2] Edward Kim, Darryl Hannan, and Garrett Kenyon. Deep Sparse Coding for Invariant Multimodal Halle Berry Neurons. *CVPR*, 2018.

#### **Posters**

## **Emojis and Weather**

CCSCNE 2018

## Learning the McGurk Effect from Raw Input

Villanova CS Senior Poster Session - Class of 2018

## Hierarchical Sparse Coding for Multimodal Deep Learning

IEEE Rebooting Computing 2017 and Villanova Undergraduate Poster Session 2017

## Fellowships and Grants

## **NSF GRFP Fellowship**

Competitive program that recognizes and supports outstanding graduate students in science, technology, engineering, and mathematics disciplines.

# Applied Machine Learning Summer Research Fellowship

10-week summer program at Los Alamos National Laboratory (10% acceptance rate).

#### Villanova Research and Travel Grant

Funding supported work at Los Alamos during the summer of 2017.