

# Darryl Hannan

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Carrboro, NC

## Education

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### University of North Carolina - Chapel Hill

August 2018 - Present

*Second 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

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### 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.

### 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

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### 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**

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- [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**

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**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**

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**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.