

# Louis A. Gomez

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## Education

**Stevens Institute of Technology, Hoboken, NJ** Fall 2019  
Doctoral Student in Computer Science

**Wichita State University, Wichita, KS** Fall 2018  
Bachelor of Science in Electrical Engineering Major GPA: 3.98  
Minor in Computer Science, Mathematics Cumulative GPA: 3.96

## Work Experience

**MIT Media Lab Research Intern – Dr. Cynthia Breazeal** Jun. 2018 – Aug. 2018  
Personal Robots

- Analyzed electro-dermal activity to detect engagement in child-robot learning interactions
- Created visualizations of relevant data metrics to explore the relationship between physiological signals and child attention with changing time
- Designed custom code to create automated pipelines for data processing

**Undergraduate Researcher - Dr. Jaydip Desai** Sept. 2017 – May 2019  
Neuro-robotics Laboratory

- Developed machine learning models to classify motor imagery signals using data recorded from an electroencephalogram device
- Created code to perform data processing which included filtering, normalization, and data augmentation

**Resident Assistant** Aug. 2017 – May 2018  
Housing and Residence Life, Wichita State University

- Cultivate community on a floor comprised of 55 students through social and educational activities
- Manage administrative tasks like room condition reports, health and safety checks and incident reports
- Perform walkthrough of the residence halls to ensure security and enforce university policies

**Undergraduate Researcher - Dr. Ali Eslami** June 2017 – Aug. 2017

- Provided weekly reports on research findings to the research group
- Compiled peer-reviewed research papers relating to Computer Aided Auscultation

**Peer Academic Leader** Aug. 2015 – May 2017  
Housing and Residence Life, Wichita State University

- Develop, plan, and execute engineering related programs with a budget of a \$1000
- Serve as liaison between residents and College of Engineering
- Encourage STEM outreach through service projects

## Publications

A. Reust, J. Desai, **L. Gomez**, “Extracting Motor Imagery Features to Control Two Robotic Hands.” IEEE International Symposium on Signal Processing and Information Technology 2018.

H. Park, I. Grover, S. Spaulding, **L. Gomez**, C. Breazeal, "A Model-free Affective Reinforcement Learning Approach to Active Personalization of a Social Robot Companion for Early Literacy Education." Association for the Advancement of Artificial Intelligence (AAAI) 2019.

**L. Gomez**, J. Desai, "Artificial Neural Network as a Classifier to Detect Hand Movement from EEG Signals," IEEE Region Five Annual Conference, Austin, TX, April 6-7, 2018 (**Winner, Student Paper Competition**)

## **Research Presentations**

### **Oral Presentations**

**L. Gomez**, H. Won Park, C. Breazeal, "Exploring Electrodermal Activity Signals as a means of Detecting Engagement in Child-Robot Interactions," MIT Media Lab Intern Symposium, Cambridge, MA, July 30<sup>th</sup>, 2018.

**L. Gomez**, J. Desai, "Artificial Neural Network as a Classifier to Detect Hand Movement from EEG Signals," IEEE Region Five Annual Conference, Austin, TX, April 6-7, 2018.

### **Poster Presentations**

**L. Gomez**, J. Desai, "Implementation of Artificial Neural Network on EEG Signals for Classification," Kansas Undergraduate Day at the Capital Research Symposium, Topeka, KS, February 14<sup>th</sup>, 2018.

**L. Gomez**, H. Won Park, C. Breazeal, "Exploring Electrodermal Activity Signals as a means of Detecting Engagement in Child-Robot Interactions," MIT Summer Research Symposium, Cambridge, MA, August 10<sup>th</sup>, 2018.

## **Societies**

National Society of Black Engineers (NSBE)

Black in AI (BAI)

IEEE Eta Kappa Nu (HKN)