

# Madhavi Rajiv

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## Education

**Duke University, Durham, North Carolina**

**Bachelor of Science in Electrical and Computer Engineering (Concentration in Signal Processing)**

**Graduated May 2019 Magna Cum Laude GPA : 3.92/4.0**

**Relevant Coursework-** Probability, Signals and Systems, Microelectronic Circuits and Devices, Computer Architecture, Digital Signal Processing, Software Design and Implementation, Random Signals and Noise, Linear Control Systems, Statistical Learning, Introduction to Robotics and Automation

**University of Southern California, Los Angeles, California**

**PhD Program in Electrical and Computer Engineering (2019- now)**

**GPA : 3.95/4.0**

**Relevant Coursework-** Probability, Linear Algebra, Estimation Theory, Random Processes, Information Theory

## Awards

- Dean's List at Duke University for 7 semesters
- Charles Ernest Seager Memorial Award for outstanding undergraduate research projects and presentations (May 2019)
- USC Annenberg Fellowship

## Experience

**Research in Professor Urbashi Mitra's Lab (September 2019 – now)**

- Working on blind channel estimation with applications in privacy in communications

**Writing Consultant at the Duke Thompson Writing Center (August 2018 – May 2019)**

- Provide consultation services for student writers of all backgrounds and levels, including graduate students
- Work with students on research papers, application essays, and any other writing assignments they may have

**Teaching Assistant for Fundamentals of Digital Signal Processing (August 2018 – December 2018)**

- Hold office hours in order to help students understand concepts and problem solving techniques
- Grade homework assignments

**Pratt Fellows Research Program in the lab of Dr. Leslie Collins (January 2017– May 2019)**

- Worked on attenuating cochlear implant artifact in EEG recordings
- Used EEGLAB, a MATLAB toolbox, in order to analyze and process EEG recordings
- Presented research to faculty and students at Duke ECE Independent Study Poster Sessions
- Presented research to a faculty panel in order to graduate with distinction

**Summer Research Internship at UC, San Diego in the lab of Dr. Juan Carlos del Alamo (May – August 2017)**

- Presented research at UCSD Undergraduate Summer Research Conference
- Implemented machine learning clustering algorithms in order to distinguish between healthy hearts and hearts suffering from dilated cardiomyopathy

**Embedded Writing Consultant for Duke class on Engineering Design and Communication (September 2017 – December 2017)**

- Consult student design teams on writing technical memos documenting their design process
- Work with professors to determine strategies to improve student writing

**Scientific Social Network Analysis Project – Bass Connections (Fall Semester 2016)**

- Wrote R scripts differentiating authors with the same name by using metadata from their papers

**Teaching Assistant for Computational Methods in Engineering at Duke University (Fall Semester 2016)**

- Tutored students on the use of MATLAB for data analysis

**Environmental Engineering Project in Honduras for Duke Engineers for International Development (May – July 2016)**

- Worked with a 10-person team to design a water filtration system throughout a town in Honduras
- Built out the system while shifting the design to accommodate environmental variables

## Activities

### Duke IEEE

- Participated on a team competing at the IEEE Southeast Con 2017
- Designed and 3D printed part of a robot which aimed projectiles at a target

### Females Excelling More in Math and Science

- Created interactive science demos for elementary school girls in order to build interest in STEM

## Skills

Java, MATLAB, Intermediate Spanish, Software Design, Written Communication