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**Umar Khan**

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## **EDUCATION**

**Emory University**, Atlanta, GA

Bachelor of Arts in Computer Science with a Physics Minor

*Computing Skills:* Java, Python, SQL, C, MATLAB, R, x86 Assembly (*in order of most to least used*)

*Relevant Coursework:* Introduction to Computer Science I and II, Discrete Structures, Data Structures and Algorithms, Assembly Programming, Programming Languages, Database Systems, Data Mining, Theory of Computing, Digital Electronics, Calculus I and II, Linear Algebra

## **RESEARCH AND TECHNOLOGY EXPERIENCE**

**Emory University Department of Computational Neuroscience**

Atlanta, GA

*Researcher*

February 2017– February 2018

- Wrote MATLAB code for conducting a Mutual Information analysis of the connection between neural signals and motor planning in Rhesus Monkeys
- Designed and presented a scientific poster for a research conference to communicate the goals, methods, and results of our study
- Principle Investigators: Dr. Sam Sober and Dr. Ilya Nemenman

**Emory Development and Alumni Relations**

Atlanta, GA

*Technical Services Intern*

January 2017– May 2017

- Organize and maintain computer equipment and other hardware to ensure proper functionality for conducting business tasks and conferences
- Regularly conduct software check-ups and installation to keep systems up to date

**Emory University Department of Physics**

Atlanta, GA

*Research Assistant*

September 2015– June 2016

- Utilized the Python programming language to create a computational model for studying memory-based behavior in animals
- Engaged in weekly seminars studying Reinforcement Learning and Motor Learning
- Principle Investigator: Dr. Ilya Nemenman

**Brookhaven National Laboratory**

Upton, NY

*Summer Research Assistant*

June 2014– August 2015

- Used the Python programming language to design a communication feed between two different microprocessors for the collection, storage, and uploading of cosmic ray data
- Used the R programming language to analyze time-based trends in collected data
- Principal Investigator: Dr. Helio Takai, Department of Physics

## **LEADERSHIP**

**Emory University: Ben Pius Mock Trial**

Atlanta, GA

*Vice-President*

September 2015– Present

- Lead team of thirty students, committing 20-25 hours weekly in preparation and execution of legal case presentations for nationwide competitions, including the national championship tournament
- Clearly communicated and presented complex legal and scientific concepts to everyday people
- Provided logistical planning and support for thirty students traveling across the nation for competitions as well as running a conference for two hundred competitors

## **ADDITIONAL SKILLS AND INTERESTS**

*Languages:* Fluent in English, conversational in Urdu

*Interests:* Reading, volunteering, Magic the Gathering, logic puzzles, strategy gaming, hiking, public speaking, traveling