

# S M Farhanur Rahman

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## Summary Statement

Master's student looking for research opportunities for developing or testing software. My education has given me an understanding of both high level software and low level software. I am motivated and eager to learn to overcome my shortcomings. I am passionate about helping others and intend to write software for the benefit of society.

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## Education

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### University of Texas at Dallas

August 2019 - May 2021, Richardson-TX

Master of Science in Computer Science

Overall GPA: 4.0

Track: Systems

### University of Texas at Austin

July 2015 - May 2019, Austin-TX

Bachelor of Science in Electrical Engineering

Overall GPA: 3.40/4.00

Primary Track: Software Engineering

Secondary Track: Computer Architecture & Embedded Systems

### Jack E. Singley Academy

August 2011 - June 2015, Irving-TX

Overall GPA: 3.98/4.00

Focus: Engineering

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## Research Interests

- Software Development
- Operating Systems
- Autonomous Systems

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## Research Experience

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### Undergraduate Research Assistant

Sept 2017 - May 2018, Austin-TX

Used C++ and python to assist a Simultaneous Localization and Mapping (SLAM) program written by a UT professor on a Linux system.

It gave me experience with the linux terminal and the process of downloading linux packages. My role in the programming portion mainly involved debugging and organizing the written code.

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## Teaching Experience

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### Undergraduate Teaching Assistant

Jan 2016 - Dec 2016, Austin-TX

My second year of undergrad I became a TA for an Undergraduate Studies course that freshmen were required to take. Through this opportunity, I gained leadership skills with the help of a tailored seminar, as well as, mentoring incoming college students. The course looked at societal issues involving race in the US, and I mediated discussions in the classroom based on the lectures.

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## Professional Experience

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### Applied Research Labs / Student Technician

May 2018 - July 2019, Austin-TX

I assisted Naval Research using Python and Matlab on a Linux-based system. Specifically, with python I completed a demo for data transmission using Confluent Kafka and also used postgresSQL to store the data. With Matlab, I did several projects including data labeling and Kernel Estimation.

### Ruffalo Noel Levitz / Student Caller

Aug 2015 - May 2016, Austin-TX

Learned how to build rapport and communicate with parents and alumni of UT Austin. The communication was through phone calls and I successfully raised over \$10,000 for the university in the time I worked there.

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## Academic Experience

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### Embedded Systems Projects

Various semesters, University of Texas at Austin

Weather Station: Implemented temperature sensor using I2C protocol on a custom PCB. Done in C using TI TM4C LaunchPAD. (Spring 2019)

Car Game: Designed and implemented a car game on the TI TM4C launchPAD in C. The game was based on pole position, where one can accelerate, and move the car left and right to avoid obstacles, until the finished line was reached. (Spring 2016)

### Android Projects

Various semesters, University of Texas at Austin

Apartmate: Created an app for roommates in software design class with a team. The app will keep track of chores, groceries and calendar between the roommates. (Spring 2018)

MapApp: Used Google Maps API to show maps/street view of an address. (Spring 2018)

WeatherApp: Used Dark Sky API to collect weather information and displayed it on app. (Fall 2017)

## **Data Science Final Project**

Fall 2018, University of Texas at Austin

Built a web scraper to extract song albums and artists from wiki. Used Spotify and Genius API to retrieve song lyrics and album art. Attempted to train dataset over GAN models to generate artwork when some lyrics were fed into the model.

## **Digital Logic Design Final**

Spring 2017, University of Texas at Austin

Encoded the Basys FPGA board with VHDL to act as a calculator. Showed values on the 7-seg display.

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## **Skills**

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### **Computer-skills**

- Languages: Proficient in Java, C, Python. Familiar with Matlab, C++, Assembly, VHDL, UML
- OS: Windows, UNIX, LINUX
- Web: HTML, CSS, JS
- Databases: PostgreSQL
- Applications: Labview/Simulink

### **Soft-skills**

- Excel budgeting
- Sales representative
- Event management
- Team management

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## **Presentations**

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### **UT Senior Design Capstone**

May 2019, Austin-TX

Our senior design team presented a demo of our senior project at the ECE Spring 2019 Showcase. A year long research and development proved fruitful in producing a Simulink software for Texas Instrument's Robotics Curriculum.

### **AP Cambridge Capstone Research Program**

April 2015, Irving-TX

I presented a research paper on Social Engineering as per the diploma requirement for the AP Cambridge program.

### **Southwest Popular/American Culture Association**

Feb 2015, Albuquerque-NM

I presented a research paper contrasting Hollywood filmography to that of Bollywood. I was able to attend the conference as part of my High School Cinema Club.

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## Activities

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- Volunteer: Pi Sigma Pi Organization, Austin City Limits, Explore UT, SXSW, Texas Tribune, Longhorn Halloween, Habitat for Humanity
  - Grader, Engineer Your World
  - Participant, Leadershape Institute

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## Honors and Awards

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- 1st place, Local Unrated Chess Competition
  - UT Austin Gateway Scholar