

NALIN MAHAJAN

CS and Math Major

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EXPERIENCE

Peer Mentor

UT

📅 2021-Present

📍 Austin, TX

- Currently occupying a paid position as a peer mentor for the FRI program. This position requires that I help teach and provide supplementary guidance to students in the FRI program.
- This allows me to simultaneously participate as an undergraduate student in research conducted in the BWI Lab with a focus on the topic of HRI (Human-Robot Interaction).

Freshman Research Initiative

UT Tides

📅 2019-2021

📍 Austin, TX

- Conducted research in the autonomous robotic stream as part of the BWI lab. Learned to use ROS, C++, openCV and some ML tools such as tensorflow.

Westwood Warrior Robotics

Westwood High School

📅 Sept. 2015 – May 2019

📍 Austin, TX

- This position required that I engage in networking with various local businesses and corporations in order to secure sponsors as well as grant money to run the team.
- Lead in programming in charge of designing and implementing programs to be run on the robots through a variety of software layers such as RobotC and Java frameworks. Projects were made by a team which utilized GIT as our preferred method of version control.

Volunteer Restore

Habitat For Humanity

📅 2018

📍 Austin, TX

- Volunteered in the Travis County ReStore center. This is a center that reuses used or donated goods such as decorations and building materials. The goal is to provide low cost and sustainable home maintenance for low income individuals.

Volunteer at Sai Baba Temple

📅 May 2016 – August 2018

📍 Austin, TX

- Volunteer for the PB&J Sandwich initiative responsible for making sandwiches for Austin Homeless Center

EDUCATION

BS of CS and Math

UT Austin

📅 2019-2022

📍 Austin, TX

- GPA: 4.0
- CS GPA: 4.0

High School/IB Diploma

Westwood High School

📅 2019

📍 Austin, TX

- GPA: 5.6/6.0

PROJECTS

Anticipatory Motion

- Creation of a VR environment that utilizes eye tracking and body tracking to identify cues for anticipating human pathing.

Natural Language Parser in C++

- An application that translates natural language utterances into lambda calculus expressions a machine readable version written in C++.

Point Cloud Stream Compressor

- A tool written in C++ integrated with ROS and OpenCV that compresses real time point cloud data to alleviate storage bottlenecks in the lab.

CNN Fruit Recognition

- A CNN based classifier built in both Tensorflow and Pytorch that was trained on the fruit 360 database. The CNN is a transfer model built on Resnet-50.

FIRST Robotics Competition 2015-2019

- An annual Global Robotics Competition that allows full freedom over robotics design in order to complete objectives and gain points. The beginning of the each round has an autonomous period where no user input can be given. Required writing operating code in Python, Java and C.

TECHNICAL SKILLS

- Well versed in Python, C++, C, Java.
- Web Dev experience JS, HTML, CSS
- Experience with Assembly

SOFTWARE SKILLS

- Familiar with Linux OS (Ubuntu, Fedora, CentOS)
- Microsoft Office
- Data tools: numpy, Tensorflow, OpenCV
- GIT and other forms of version control