

# Yashas Salankimatt

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## Education

2019-2022

### Texas A&M University- College Station

GPA: 3.71

Bachelor of Science, Computer Engineering (Minor: Mathematics)

## Work Experience

### Software Engineer Intern at Realize.design

Dec 2021 - Current

- Improving accuracy of dimension extraction from SLAM algorithm and ARkit
- Parallelizing core computations to allow more headroom for more intensive local features
- Developing machine learning methods to identify floor textures and match to digital counterparts

### Undergraduate Researcher with Dr. Robin Murphy

Aug 2021 - Current

- Contributing to the NSF and Microsoft Research backed Survivor Buddy project
- Designing new iterations of the Survivor Buddy hardware and electronics for disaster relief
- Developing a moving and environment mapping platform for Survivor Buddy base for telemedicine use

### Undergraduate Researcher with Dr. Stavros Kalafatis

Aug 2021 - Current

- Creating a system to localize a robotic system based on landmarks, filtering out everyday changes to indoor environments
- Programming a model to update pre-existing indoor maps with new data on changes to indoor environments such as doors or furniture moving
- Implementing the above systems on a physical robot with LIDAR and an RGB-D camera, making use of ROS and the Gazebo simulator to quickly iterate on the SLAM models

### Engineering Incubator Founder

Dec 2019 - Current

- Founder in the engineering-based business incubator at A&M working on my own startup
- Developing an inexpensive robotic arm to automate part inspection for job shops
- Conducted market analyses, customer interviews, and analyzed business feasibility

## Leadership

### TAMUhack, Hardware and Logistics Director

Mar 2020 - Current

- Recruiting sponsorships and maintaining sponsor relations for our hackathons
- Organizing logistics including prizes, venue, food, live streaming, scheduling, etc.

### TAMUmake, Tech/Hardware Director

May 2020 - Aug 2021

- Assessed hacker needs, created hardware care packages for students for our hardware hackathon
- Created hardware focused workshops and learning content for other students

## Awards

Sep 2021

- Texas A&M Undergraduate Research Scholar

Mar 2021

- RowdyHacks 2021 Best Hardware Hack Winner

Feb 2021

- Hacklahoma 2021 Best Hardware Hack Winner

Feb 2020

- TAMUmake 2020 1<sup>st</sup> place & Accessibility Challenge Winner

Sep 2019

- Kurt Giessler Youth Achievement Ambition Grant Recipient

Jan 2019

- Brockman Scholarship Recipient (Full ride and cost of attendance scholarship)

## Projects

### Teddy, automated scheduling/planning for students

Aug 2021

- Developed a system to help students manage their work and classes by performing automated task planning, fitting around their existing calendars
- Implemented using React, React Native, Firebase, GCal API, Bootstrap

### Creating a Custom, Inexpensive, Heavy Duty CNC Router

Dec 2020

- Designed and built a CNC router for \$500 with the specs of \$2K hobbyist machines
- Wrote a custom C firmware branching off of GRBL for smart control of the machine

### System to Track Body Kinematics Without Using Cameras

Aug 2019

- Used IMUs to create a cheap system to accurately track body motion w/out cameras
- Implemented and configured a rudimentary Kalman filter; Performed signal processing and custom packet manipulation to increase performance of system

## Skills

Software Engineering

- C++, Javascript, Python, Java, HTML/CSS, Typescript, React.js, React Native, Tailwind, Firebase

CE/MechE, Robotics

- CAD Modeling, Finite Element Analysis, CNC Machining, ROS, Mapping and Localization Systems, TensorFlow, Microcontroller Design, Integrated and General Circuit Design