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

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 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

TAMU Computer Engineering & Systems Group Researcher

Aug 2019 – Jun 2020
- Developed a VR environment for integration of NLP for human-computer interface comparisons
- Created methods to quantify success of NLP tests in VR, a qualitative problem

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 1st 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