

# Anshul Sanamvenkata

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## EDUCATION

### UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

B.S COMPUTER ENGINEERING  
Exp. 2021 | Urbana, IL  
GPA: 3.65

## LINKS

Github: [anshulsanam](#)  
LinkedIn: [anshulsanam](#)  
YouTube: [anshulsanam](#)

## COURSEWORK

Embedded Systems  
Applied Parallel Programming  
Algorithms  
Operating Systems and Design  
Intro to Robotics  
Artificial Intelligence  
Data Structures  
Analog Signals  
Computer Architecture  
Probability with Engineering Application

## SKILLS

Embedded Electronics and Systems  
Computer Vision  
3D Design and Manufacturing  
PCB Design  
Kernel Programming

## LANGUAGES AND FRAMEWORKS

### Proficiency:

- Python
- C
- C++
- x86
- ROS

### Exposure:

- Java
- JavaScript
- Numpy
- OpenCV
- TensorFlow
- Keras
- CUDA

### Familiar:

- Swift
- React
- Node.js
- Flask
- Socket.io

## EXPERIENCE

### NVIDIA

May 2020 - Present

- Extended the CUDA compiler test suite made for a safety subset of CUDA (specific to autonomous vehicles) to the more general access CUDA compiler available to the public.
- Wrote new test cases and extended existing ones to cover all features of the non-safety version of compiler.

SOFTWARE ENGINEERING INTERN  
Santa Clara, CA

### CARGILL DIGITAL LABS

May 2018 - Sep 2018

- Utilized computer vision to classify animal produce in terms of color, size, type, and length as well as keep track of count as they rapidly move through the harvest machine.
- Built front and backend for a webapp that shows farmers remaining feed in animal feed bins by using data collected by LIDAR sensors. It calculates historical trends, consumption rate, density, volume, and projected empty date.

SOFTWARE ENGINEERING INTERN  
Champaign, IL

### PETRONICS

May 2018 - Sep 2018

- Wrote C++ code for autonomous pet assistant robot that uses Visual Inertial Odometry and SLAM along with complex path planning algorithms to navigate indoor environments.
- Used ROS to aid in development of control systems for the robot.
- 3D designed and built calibration bed for IMUs that is used in the manufacturing process.

ENGINEERING INTERN  
Champaign, IL

### SATDEV

Sep 2017 - May 2018

- Oversaw antenna deployment team for CubeSail, a new platform to test solar sails.
- Collaborated with Command and Data Handling Team to write code for antenna deployment, and was instrumental in decreasing communication latency.
- Improved previous antenna deployment times by over 50%, and improved power and current consumption by over 70%.

ANTENNA DEPLOYMENT TEAM LEAD  
Champaign, IL

## PROJECTS

### OPERATING SYSTEM

March 2019 - May 2019

- Created a Unix-like, preemptively multitasked operating system using virtual memory, including signals, starting from only a bootloader.
- Wrote a fully featured GUI and window manager for user level programs and made a graphics card driver to accelerate window dragging and resizing features.

SOFTWARE DEVELOPER  
Champaign, IL

### BLUETOOTH CONTROLLED MODULAR DRONE

May 2016 - Sep 2016

- Fully designed all aspects of a modular drone platform.
- Designed everything including the circuit board, 3D printed parts, software running on microcontroller, and smartphone app to control the drone.
- Referenced bluetooth stack for modem in C and assembly, and wrote an android app to interface with it in Java

ROBOTICS ENGINEER  
Ashburn, VA

## TECHNICAL ORGANIZATIONS

### ACM SPECIAL INTEREST GROUP

Jan 2020 - Present

- As chair of SIGOPS (Special Interest Group for Operating Systems) I organize events, seminars, and projects that deal with low level operating system fundamentals.
- Documented our attempts at a simple CLI based OS built on the Raspberry Pi using ARM assembly and C

CHAIR  
Champaign, IL