

# Parth Sarthi Sharma

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## EDUCATION

### CORNELL UNIVERSITY

MENG IN ELECTRICAL AND  
COMPUTER ENGINEERING

Jan 2021 - Dec 2021

Cum. GPA: 4.04

### AIACR

B.TECH IN ELECTRONICS AND  
COMMUNICATION ENGINEERING

2015 - 2019

Overall CGPA: 8.3 / 10

## LINKS

Github:// [ParthSSharma](#)

LinkedIn:// [parthssharma](#)

## COURSEWORK

### GRADUATE

Design with Embedded Operating

Systems

Digital Systems Design Using

Microcontrollers

Power Electronics

Integrated Micro Sensors and Actuators

Robots as Embodied Algorithms

### UNDERGRADUATE

Embedded Systems

Microprocessors and Microcontrollers

Computer Organisation and Architecture

Data Structures and Algorithms

## SKILLS

Hardware Platforms

RP2040 • PIC32 • RaspberryPi 4 •

ESP32 • Arduino

Programming Languages

C\C++ • Python • JAVA

Tools

MATLAB • Git • Processing • OpenCV •

LaTeX

Areas of Interest

Embedded Systems • RTOS • Internet of

Things • MEMS Devices

## WORK EXPERIENCE

### OCULII CORPORATION | SOFTWARE ENGINEER

Jan 2022 – Current

- Working on writing firmware for FMCW radars

### COLLECTIVE EMBODIED INTELLIGENCE LAB, CORNELL UNIVERSITY | GRADUATE STUDENT RESEARCHER

Jun 2021 – Current

- Worked on the development of a human scale inflatable (HSI) rover called Martha in collaboration with a hardware team.
- Redesigned the pre-existing pulley architecture and software to solve the problem of overshooting.
- Successfully optimized the preexisting code-base to reduce the memory usage of the rover by 60%.

### INDIAN INSTITUTE OF TECHNOLOGY, DELHI | RESEARCH ASSOCIATE

Jun 2019 – Sep 2020

- Worked on Genetic Algorithms for energy conservation in power grids under Prof. Ashu Verma
- Worked on hacking CAN Bus and disrupting data under Prof. B. K. Panigrahi

### INDIAN INSTITUTE OF TECHNOLOGY, DELHI | INTERN

Jun 2018 – Aug 2018

- Worked on "Energy Efficient Buildings" under Prof. B.K. Panigrahi and Prof. Ashu Verma
- Successfully developed an integrated light automation system (for HVAC) with 4 ambient zones

## RESEARCH

- Patents:

Ashu Verma, B.K. Panigrahi, Sumedha Sharma, Parth Sharma, "Optimal Building Energy Management System" (Indian Patent Application No.: 202011051401)

- Publications:

"A Cyber-Secure Distributed Control Architecture for Autonomous AC Microgrid," in IEEE Systems Journal, doi: 10.1109/JSYST.2020.3020968.

"Development of a Cost-effective Color Pattern-based Security System," 2019 6th International Conference on Computing for Sustainable Global Development (INDIACom), New Delhi, India, 2019, pp. 988-991.

"Coin Detection based Mobile Charging System," 2019 6th International Conference on Computing for Sustainable Global Development (INDIACom), New Delhi, India, 2019, pp. 60-63.

## PROJECTS

Working on the RaspberryPi Pico (MEng Project)

Rescue Robot: Scouting Owl

Voice Controlled Dino Game

COVID-19 Social Distance Enforcing Robot

High frequency AC switching using TRIACS

Implementation of Alexnet for self-driving car (Major)

Hand Motion Controlled Quadpod Robot (Minor)