

# Parth Sarthi Sharma

<https://parthssharma.github.io/>  
pss242@cornell.edu | +1 (607)2626490 | +91 9891938444

## EDUCATION

### CORNELL UNIVERSITY

MENG IN ELECTRICAL AND  
COMPUTER ENGINEERING

December 2021

Cum. GPA: 4.0

### AIACTR

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

Integrated Micro Sensors and Actuators

### UNDERGRADUATE

Embedded Systems

Microprocessors and Microcontrollers

Computer Organisation and Architecture

Data Structures and Algorithms

## SKILLS

### Hardware Platforms

RaspberryPi Pico • PIC32 • Arduino •

RaspberryPi 3B+/4 • NodeMCU

### Programming Languages

C/C++ • Python • JAVA

### Tools

MATLAB • MIT App Inventor •

Processing • Gurobi • OpenCV • L<sup>A</sup>T<sub>E</sub>X

### Areas of Interest

Embedded Systems • RTOS • Internet of

Things • MEMS Devices

## WORK EXPERIENCE

### COLLECTIVE EMBODIED INTELLIGENCE LAB, CORNELL UNIVERSITY |

GRADUATE STUDENT RESEARCHER

Jun 2021 – Current

- Currently working on the development of a human scale inflatable (HSI) rover called Martha in collaboration with a hardware team.
- Successfully optimized the preexisting code-base to reduce the memory usage of the rover by 60%.

### CORNELL UNIVERSITY | GRADUATE TEACHING RESEARCH SPECIALIST

Jan 2021 – May 2021

- GTRS for ECE 4670 (Digital Communication System Design)

### 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.

"Localisation of License Plate and Character Recognition Using Haar Cascade," 2019 6th International Conference on Computing for Sustainable Global Development (INDIACom), New Delhi, India, 2019, pp. 971-974.

## PROJECTS

Working on the RaspberryPi Pico (MEng Project)

Rescue Robot: Scouting Owl

Voice Controlled Dino Game

Multi-Pit Cantilever Biosensor

High frequency AC switching using TRIACS

Implementation of Alexnet for self-driving car (Major)

Hand Motion Controlled Quadpod Robot (Minor)