

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^AT_EX

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

- Optimized the performance of Martha (HSI rover) by 60%.
- Currently working on the unit testing and integration testing of all rover components.

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)