Parth Sarthi Sharma

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EDUCATION

CORNELL UNIVERSITY
MEng in Electrical and Computer Engineering
Final Semester
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
ECE 5725: Design with Embedded Operating Systems
ECE 4760: Digital Systems Design Using Microcontrollers
ECE 4320: Integrated Micro Sensors and Actuators

UNDERGRADUATE
ETEC-401: Embedded Systems
ETEC-305: Microprocessors and Microcontrollers
ETCS-204: Computer Organisation and Architecture
ETCS-209: 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 • LaTeX
Areas of Interest
Embedded Systems • Internet of Things • MEMS Devices

WORK EXPERIENCE

COLLECTIVE EMBODIED INTELLIGENCE LAB, CORNELL UNIVERSITY | Graduate Student Researcher
Jun 2021 – Current
- Working on software optimization of Martha (HSI rover)

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)