

# SIDDHARTH SHARMA

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## EDUCATION

### THE PENNSYLVANIA STATE UNIVERSITY

*Masters of Science in Computer Science (gpa-3.4/4)*

August 2022 – August 2024

Pennsylvania

- Thesis - Object/Human **tracking** in **3D space** Using Monocular Vision.
- Teaching Assistant - Teaching and grading Data structures and algorithm courses

### GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY

*Bachelor of Technology in Computer Engineering (gpa-8.2/10)*

August 2018 – May 2022

Delhi

- **Research paper** on blockchain for **criminal forensics** and **security systems** ( Accepted in Journal of Discrete Mathematical Sciences and Cryptography - ESCI Indexed ) | <https://doi.org/10.47974/JDMSC-1733>
- Conducted Python classes for freshmen and sophomore students

### Indian Institute of Technology Kharagpur

*Internet of Things - Elective Course*

January 2022 – April 2022

- Learned about Communication Protocols | Sensor Networks | Arduino Programming | Raspberry Pi

## TECHNICAL SKILLS

**Languages** : Python, C++, C, Swift, JavaScript, NodeJS, MySQL, HTML, CSS, ReactJS

**Skills** : Data-structures, Algorithms, Git, Artificial Intelligence, Machine Learning, Blockchain, Augmented / Virtual Reality, Unity, Data Science, Cyber Security, Internet of Things

## WORK EXPERIENCE

### Software Research And Development

*TE Connectivity*

October 2022 - May 2023

Pennsylvania

- Created a novel AI solution that increased efficiency by automating a manual process to find the Region of Interest in monochromatic low-contrast images, resulting in a 85% reduction in processing time and improved accuracy.
- Implemented efficiency enhancements to an established production line, resulting in a reduction of up to 6 months in production time and cost savings of up to \$100,000.

### Software Research Co-op

*Deep LogicTech (TekMonks)*

March 2021 - June 2022

Delhi

- Engineered an **ML solution** (leveraging isolation forest) to detect **cyber attacks** on databases and SSH servers, achieving an **accuracy of 90%** in internal testing.
- Engineered an NLP-based database query system, reducing data retrieval time by 90%.

### International Student Mentor

*The Pennsylvania State University*

March 2023 - May 2024

Pennsylvania

- Guided 10+ international students in academic and cultural transition; led workshops on cross-cultural communication resulting in 25% increase in student satisfaction and 15% improvement in GPA
- Crafted and executed community outreach programs, driving tangible contributions to the organization's mission and resulting in a 100% increase in community engagement.

## PROJECTS

### Distributed file management system using blockchain as a database

August 2022 – May 2023

- Developed a blockchain from scratch using the *SHA256* hashing algorithm and an alpha-numeric substitution cipher protocol.
- Deployed a multi-system communication network using sockets connecting 10+ devices to implement an asynchronous database.
- Deployed a Virtual Private Network (VPN) infrastructure connecting over 10 computers across international locations.
- Implemented encryption and decryption protocols for various file formats by effectively manipulating and securing the file data.

### False prediction detector

August 2018 – May 2022

- Created an ML solution to detect data points that would be false predictions by neural networks (Tested on Brain tumor detection models using MRI scans with an **accuracy of 96%**)
- Crafted and expanded training data resulting in augmentation to 8 times the initial size of the data set and over 10,000 data points.