SIDDARTH GUPTA

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Professional Summary

A pragmatic Computer Science student with 5 years of coding experience and a passion for learning and building new things. Strong organizational abilities with successes managing academic projects and mentoring.

Education

The Pennsylvania State University, University Park , PA — Expected Graduation: 2026

College of Engineering — GPA: 3.01/4.00

B.S in Computer Science

Recipient of Erickson Discovery Grant 2023

Work Experience

Computer Science Research Assistant - The Pennsylvania State University, Pennsylvania

· Worked under Dr. Daniel Kifer, assisting him in the development of a successful Privacy Preserving System. March 2023 - Present

· Developed privacy Preserving prototypes, parsing SQL queries using tech such as Apache Calcite for maximum efficiency.

· Provided reasonable level or privacy protection while also preserving the utility of data for statistical analysis.

Programming Intern - Petrous, India

· Worked with analysts to prepare test plans and assess test data. June 2022 -August 2022

· Used critical thinking to simplify problems, evaluate solutions & make decisions.

· Created databases, web forms and other applications for diverse uses. Designed and developed analytical data structures using Python.

Astrophysics Teaching Assistant The Pennsylvania State University

· Collaborated with Dr. Julia Kreganow as a teaching assistant for Astro 1: Astronomical Universe course. January 2023 - May 2023

· Facilitated student engagement by addressing inquiries and clarifying course concepts.

· Contributed to fostering a better understanding of the course material among over 250 students.

Projects

Enhanced neural Cleanse Detection June 2023 - present

· Strengthened Neural Cleanse's backdoor detection with advanced techniques.

· Published paper advances secure machine learning through improved detection.

· Integrated techniques effectively for stronger machine learning security.

Privacy Preserving System March 2023- present

· Developed PINQ-based system with differential privacy techniques for secure data sharing.

· Enabled accurate statistical analysis while safeguarding individual data confidentiality.

· Contributed to user privacy advancements through pioneering research paper on secure data analytics.

Image Classifying Convolutional Neural Network January 2023- April 2023

· Achieved high-accuracy image classification on CIFAR-10 dataset using CNN architecture.

· Demonstrated improved performance compared to a simple artificial neural network model.

· Successfully deployed an impactful image classifier with TensorFlow, advancing model accuracy.

ISS Tracker September 2022 - December 2022

· Developed real-time International Space Station (ISS) Tracker project.

· Utilized APIs to continuously update and display ISS coordinates on a world map.

· Enabled user exploration of ISS's live position for an interactive experience.

Skills

- Languages • Python, Java, Javascript, HTML, CSS, C, SQL.
- Microsoft
- Frameworks • Materialize, ReactJs, Django, Apache Calcite.
- Excel, Powerpoint, Access, Word.