

# Saatvik Pradhan

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## EDUCATION

### Schreyer Honors College, Pennsylvania State University

BS in Computer Science and BS in Mathematics

Dean's List: Fall 2022, Spring 2023, Fall 2023, Spring 2024, Fall 2024

GPA: 3.98/4.00 Awards: President Walker Award, President Sparks Award

State College, PA

Expected May 2026

### Stanford University

Summer Undergraduate Visitor (Artificial Intelligence, Machine Learning)

GPA: 3.70/4.00

Palo Alto, CA

May 2023 - Aug 2023

## EXPERIENCE

### Team Leader and Machine Learning Intern

Nittany AI Advance

State College, PA

Dec 2024 - Present

- Leveraging **Large Language Models (LLMs)** and advanced **AI/ML techniques**, including **Haystack, Azure AI Foundry**, and other frameworks, to enhance team formation, prototype feedback, and evaluation for improved student outcomes.
- Building a system for **role recommendation, prototype critique, and judge score predictions**, fostering innovation.

### Research Assistant

RAISE Lab Pennsylvania State University

State College, PA

Aug 2024 - Present

- Reviewed **100+ studies** on **rater disagreement**, identifying patterns and inconsistencies to improve **assessment reliability**.
- Implementing **advanced statistical methods** to enhance evaluation frameworks and ensure data integrity.

### Research Assistant - Multi-Campus Research Experience for Undergraduates 2024

Pennsylvania State University

State College, PA

Jan 2024 - Aug 2024

- Processed **T1-weighted MRI** data for **887 patients** from the **PPMI Database** using segmentation and atlas-based alignment.
- Developed a pipeline leveraging **3D CNNs, SVM, and Random Forest** to classify MRI scans into 4 groups (**PD, Control, SWEDD, Prodromal**), achieving **65.9% multiclass accuracy** and **76.4% binary accuracy**.

### Part-Time Student Manager/ Crew Leader

Housing and Food Services Pennsylvania State University

Harrisburg, PA

Sep 2022 - Aug 2024

- Supervised **200+ student workers**, ensuring smooth daily operations and timely service for **5,000+ students**.
- Trained and mentored **80+ new team members** **boosted onboarding efficiency by 20%**, and fostered team collaboration.

### Research Assistant - Multi-Campus Research Experience for Undergraduates 2023

Pennsylvania State University

State College, PA

May 2023 - Aug 2023

- Engineered **adaptive learning algorithm** to adjust rates based on rejects, improving WisdomNet's reliability by **90% for safety-critical use**.
- Tested on **breast cancer, synthetic datasets, and MNIST**, achieving **10% accuracy improvement**.

## PATENTS & COPYRIGHTS

- In-Pipe Inspection Robot:** Indian Design Patent (Number: 360985-001)
- Senior e-Bike:** Indian Design Patent (Number: 344685-001)
- Automatic Public Ration Dispensing System:** Indian Copyright Patent (Number: SW - 14713/2021)

## PROJECTS

Course Pilot | React.js, Node.js, Firebase, Large Language Models (LLMs), APIs

Oct 2024 - Oct 2024

- Built a **course recommendation system** analyzing **10,000+ courses and 200 majors**, delivered tailored plans based on preferences and **improving accuracy by 40%** through streamlined data collection using **web scraping and pipelines**.

Pet Store Web Application | Spring Boot, Java, Thymeleaf, HTML, CSS, Spring Security

Aug 2023 - Dec 2023

- Built a **full-stack e-commerce app** with **secure authentication, cart management, and 100% device compatibility**.
- Improved page load times by **20%** through efficient content rendering using **Thymeleaf**.

## SKILLS

**Languages:** Python, Java, C/C++, JavaScript, HTML/CSS, MySQL, Firebase DB, R, Unix, Linux

**Frameworks/Libraries:** Pandas, NumPy, scikit-learn, TensorFlow, PyTorch, OpenCV, Spring Boot, Spring Security, ReactJS, Angular, jQuery, Node.js, Bootstrap, Jupyter Notebook, Google Colab, Docker, AWS, Agile, Azure

**Machine Learning & AI:** Computer Vision (CNN, YOLOv5), Natural Language Processing, Deep Learning, LLM, Compilers

**Data Engineering & Analysis:** Data Wrangling, Feature Engineering, Statistical Modeling, EDA

**Mobile & IoT:** Android SDK (Java, Kotlin), MIT App Inventor, Arduino, Raspberry Pi