Meerav Shah

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EDUCATION

The Pennsylvania State University — University Park, PA
College of Engineering | Bachelor of Science in Computer Science — Graduation: May 2026
Eberly College of Science | Minor in Astrophysics — *Dean's List: 2 semesters*

Work Experience

Rolai — New York, NY
AI Engineering & Applied Research Intern — Sep 2025 – Present

- Collaborating with product and research teams & contributing to platform feature development and academic outputs.
- Leading a human-centered research study to evaluate the effectiveness of the academic advising chatbot and measure its impact in improving advising outcomes in real-world higher education contexts for >50 students.

AI Engineering Intern — Jun 2025 – Aug 2025

- Deployed an academic advising chatbot on the Rolai platform, integrated live web-scraping to dynamically update its knowledge base with relevant web sources, reducing manual content maintenance by ~50%.
- Co-authored 3 white papers on AI in education and worked with applied research to design a human-centered research study on impact of agentic workflows and retrieval-augmented generation (RAG) in academic advising

Academic Advising Chatbot, Penn State University — University Park, PA
Undergraduate Researcher, Primary Investigator — Jun 2024 – Present

- Developed an academic advising chatbot using commercial LLMs and APIs for the College of IST to assist students with course selections and academic queries, reducing student advising load by 35% with 74% more details.
- Published a research paper for ACM SiGCSE(2025) on the development, implementation, and impact of the academic advising chatbot, its influence on students and its relevance in the current academic landscape.

Autonomous UAV Research project – MCREU — University Park, PA
Undergraduate Researcher, Primary Investigator — Jun 2024 – Aug 2024

- Studied the impact of cloud and icing conditions on UAV performance using torque loss & RPM data: +/- 25%.
- Developed a methodology to monitor UAV propeller performance using onboard computers, and data analysis, and proposed future research focusing on real-time data processing algorithms to mitigate icing effects on drones.

Penn State College of IST — University Park, PA
Lead Learning Assistant, IST 130 – Intro to AI & Art — Jan 2024 – Present

- Leading a team of 14 Learning assistants, managing grading, correspondence, and class operations for >1100 students
- Trained and mentored 20 LAs, designed coursework and created documentation for future semesters and handover.

NASA Big Idea Challenge 2024 — University Park, PA
Team Lead; Undergraduate Researcher — Oct 2023 – Feb 2024

- Led a team of 15 individuals developing an inflatable technology project to 3d print on the moon using lunar regolith.
- Programmed the payload using standard Arduino IDE based on C# to collect 6 real-time datapoints and visualize it.

Autonomous Vehicle Research Project - HTI Lab — University Park, PA
Undergraduate Researcher — Sep 2023 – May 2024

- Programmed 5 simulation environments to study driver behavior with autonomous vehicles penetration (25-100%)

Skills & Interests

- Technical**:** Python, Java, C, C++, C#, SQL, HTML/CSS, JavaScript, PyTorch, NumPy, Linux/Unix, GitHub, Vercel, Version Control (Git), MySQL, NoSQL, MS Office, Excel, Data Science, Backend Development, Product Design, Database Management, Artificial Intelligence, Machine Learning, Regression modelling, Scikit-learn, classification.
- Professional: Leadership, decision making, effective communication, attention to detail, growth mindset, adaptability.
- Interests: Space Systems Engineering, Computer Vision, robotics, product management, aviation, automation.