

# Anushcka Joshi

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## EDUCATION

### The Pennsylvania State University - Schreyer Honors College

Computer Science, B.S. & Digital Arts and Media Design, B.Des.

- GPA: The President Walker Award (4.00/4.00), Dean's List

State College, PA

2023 - Present

## TECHNICAL SKILLS

**Languages:** Python, Java, JavaScript, Processing, SQL

**Frameworks:** Flask, Streamlit, Tkinter, Bootstrap

**Developer Tools:** Git, Google Cloud Platform, Jupyter Notebook, Postman, Android Studio

**Libraries:** OpenCV, Scikit-learn, SciPY, NumPY, Pandas, Socket

## RESEARCH

### Undergraduate Research Assistant

James Z. Wang Research Group

State College, PA

2024

- Analyzed lighting consistency in Marie Bracquemond's Impressionist works using occluding contour analysis
- Applied Gaussian blur, Sobel filters, Canny edge detection to enhance lighting and stylistic evaluation

### Team Leader

The Indian Space Settlement Design Competition by Atlantis Erudition

Tezpur, India

2021

- Cowrote a 60-page research paper on Aphroditav: Settlement on Venus
- 1st Runners Up, Quarter-finals of the Indian Nationals

## INDEPENDENT COMPUTER SCIENCE PROJECTS

### Seasons of change | Processing, Python, Kinect, Casio Projector

December, 2024

- Designed an interactive art installation portraying fall colors triggered on motion detection by Kinect
- Captured and analyzed campus-wide fall hues using K-means clustering to project onto a single evergreen tree
- Crafted a visual storytelling experience highlighting human-driven transformation of nature
- Applied Sobel filters and Perlin noise-based smoothing to isolate and refine tree edges dynamically

### The Rocking Horse | Python, gpiodzero

November, 2024

- Designed and built a wooden rocking horse in a woodworking shop, combining craftsmanship with interactive technology
- Built a Raspberry Pi system to detect motion in close proximity and trigger a "neigh" sound

### Object Tracking | Python, OpenCV, Flask, Tkinter

May 2023

- Real-time multiple object tracking functionality on Raspberry Pi 4 with OpenCV

## SOFTWARE EXPERIENCE

### Software Intern

Nov. 2021 – Apr. 2022

NewSpace Research and Technologies

Bengaluru, India

- Developed android app to read weather information at any location clicked on the map
- Programmed a standard Mesh networking architecture for communication between unmanned aerial vehicles
- Studied basic Aircraft Design and understanding fundamentals of design approach

## LEADERSHIP

### Vice-President and Event Planner

2024

Assistive Technology Club

State College, PA

- Established the club to drive innovation in designing technology for individuals with disabilities
- Coordinated funding and partnered with Student Disability Resources on campus to execute the club's vision
- Assembled a student team to apply design thinking on accessibility projects, building a strong campus network

### Facilitator, Facilitated Study Group

2024

Women in Engineering Program

State College, PA

- Mentored peers in multivariable calculus, fostering collaboration and a supportive learning environment