Pranav Gupta

Great Falls, VA

✉ p.gupta@duke.edu   🏠 pranavgupta.net   in pranavg22

As a current college student pursuing dual majors in Mechanical Engineering and Computer Science, my objective is to leverage my strong analytical skills and interdisciplinary knowledge to contribute to innovative projects and solutions. With a proficiency in deconstructing complex problems and synthesizing diverse solutions, I am committed to optimizing designs and enhancing project outcomes. My aim is to apply my expertise and passion for problem-solving to make meaningful contributions in a dynamic professional setting.

Education

Duke University   **August 2023 - May 2027**
Bachelor of Engineering   *Durham, NC*
- **GPA:** 3.6 of 4.0

Engineering Experience

The George Washington University   **Jan 2024 - Present**
AI/ML Researcher
- Developed an algorithm for Vision-Based Perception with Safety Awareness for UAS Autonomous Landing
- Evaluated a training dataset for the algorithm which included gathering and labeling data
- Assisted in implementing and editing an A* optimal cost path for generating efficient routes.

Duke Motorsports   **Sep 2023 - Present**
Powertrain Engineer
- Designed and Manufactured a Custom Oil Pan which increased vehicle oil pressure by 50%.
- Manufactured a Custom Fuel Rail using CNC milling which improved overall Engine Fueling.
- Built Engine Dyno setup to gather more accurate Engine Data to use in tuning, which increased performance by 20%.
- Spearheaded an experiment to obtain our radiator mass flow rate and worked with AKG to determine optimal radiator.
- Designed a custom swirl pot to de-aerate the cooling system of our vehicle, allowing it to run more 8% cooler.

Duke University   **Jan 2024 - Present**
LabRAT
- Advised 30+ engineering students on various academic projects for EGR101 and EGR121.
- Maintained 3D printers, Laser Cutters, and CNC Mills for student use.
- Organized various shop tools to streamline student workflow and project completion.

Oystilter   **Dec 2021 - Jan 2024**
Founder
- Engineered custom submersible device that is capable of removing over 50% of phosphorus and nitrogen in natural waterways.
- Devised a unique filtration method that is capable of filtering flowing water without electricity.

Additional Work Experience

Valence Robotics   **Sep 2023 - Present**
Mentor

CodefyCS   **Dec 2020 - Jan 2024**
Executive Director

Kumon Learning   **May 2019 - Jan 2023**
Tutor

Technical Skills

Programming Languages   Java, Python, C, C++, HTML/CSS
Software/Tools   Solidworks, ANSYS, Fusion 360 CAD+CAM, Inventor, CNC Machining

Awards

Diamond Challenge - Semifinalist Entrepreneurship Competition, One of 50 out of 600 teams   **January 2022**
MIT THINK - Honorable Mention Research mentorship program promoting student-led innovation in STEM   **February 2022**
Taco Bell Ambition Accelerator - Semifinalist Entrepreneurship Competition, One of 25 out of 500 teams   **September 2022**
Presidential Volunteer Service Award - Silver Achieved by Volunteering for over 200 hours.   **October 2022**