YASH SAXENA

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EDUCATION

Purdue University | West Lafayette, IN *Graduating May 2027*
BS Mechanical Engineering | Minors: Math, Finance *GPA: 3.84*

WORK EXPERIENCE

Michelin Ft. Wayne, IN
Process Quality Engineer Intern (SolidWorks, Python/Embedded C) May 2025 – Aug 2025

- Designed material liner repair process automation apparatuses to improve operation safety, productivity, & quality
  - Optimized COGNEX neural network anomaly training through hidden layer heuristics integration
- Proposed & designed auto-centering mechanism for material wind-up to reduce product packaging variation
- Initiated change management & led intern team in designing product rework process (~$25,000 annual savings)

Purdue University – ML for Engineers Lab West Lafayette, IN
Undergraduate Research Assistant – Neural Network Development (Python, PINN dev) Jan 2024 – Aug 2025

- Developed machine learning programs to improve fluid flow & heat transfer simulations in free flow scenarios
- Improved iteration learning time by 5% with hidden layer optimization techniques

Florida International University – Robotics Research Lab Miami, FL
Research Assistant – PID Control Testing (MATLAB/C, SolidWorks) June 2022 – Aug 2022

- Optimized PID control system for active exoskeleton that helps glovebox operators fight fatigue
- Designed sensor testing enclosure for prototype tests

TECHNICAL EXPERIENCE

Purdue Formula SAE
Aerodynamics Sub-Team Member & Bodywork System Owner (Siemens NX, Ansys ACP/CFD) Aug 2023 – Present

- Design & analyze flow conditioning structures (FEA, Ansys ACP/CFD)
- 15% mass reduction through design & composite layup schedule optimization (lightest bodywork in team history)
- Achieved 8% increase in aerodynamic efficiency of 2025 rear wing through beam wing vortex generator design
- Create prepreg & VARTM layup molds for carbon fiber & fiberglass aerodynamic element manufacturing

Delta Upsilon Grand Prix Team
Team Director & Driver Aug 2024 – Present

- Driver in 2025 Purdue Grand Prix to sprint race win & 17th out of 74 karts overall in team's rookie year
- Procured & optimizing second new kart for 2026 Purdue Grand Prix
- Raised ~$50,000 in funding to restart & grow team through company & alumni networking

American Society of Mechanical Engineers
EV Grand Prix Driver & Systems Team Member May 2024 – May 2025

- Design distribution board to improve low voltage system packaging (motor controller, pre-charge circuitry, etc)
- Lead mechanical kart setup (vehicle dynamics) & EV powertrain setup optimization opportunities

Chief Engineer May 2024 – May 2025

- Provide technical feedback, ideate solutions, & troubleshoot issues across 35+ multidisciplinary design projects
- Taught seminars/workshops on rapid prototyping, electronics basics, manufacturing methods, etc.

C-UASC Drone Systems Design Lead Jan 2025 – May 2025

- Prototyped initial rotocopter designs & stabilization scripts (IMU-based PID control development)
- Taught new members about aerospace design processes & iteration focus points

PERSONAL PROJECTS

StockDuels Founded Mar 2022

- Founded community service project to improve financial literacy among young adults
- Developed main website (stockduels.onrender.com) & long-term investment potential algorithm (Flask, Python)
- Researched, wrote, filmed, & edited articles & videos demystifying investment concepts & strategies (SEO)

SKILLS, AWARDS, & INTERESTS

CAD Software: Fusion360 (9 yrs), KiCAD (7 yrs), SolidWorks (6 yrs), Siemens NX (3 yrs), Ansys CFD/ACP (1 yr)
Programming Skills: Python, C, C++ (12 yrs), HTML5, CSS, Javascript, (8 yrs) MATLAB/Simulink, Java (6 yrs)

Awards: 1st place internationally in American Scholastic Mathematics Association Annual Contest (2023)
Hobbies: Racing Driver (24 Hours of Lemons, Purdue Grand Prix), Sim Racer (iRacing, F1 E-Sports), TEDx Speaker, Marching/Concert Band, Varsity Swimming