

Arya Bhangale

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EDUCATION

Purdue University, College of Engineering West Lafayette, IN
2025-2029
Bachelor of Science in Engineering, Intended Major: Mechanical Engineering

West Windsor Plainsboro High School South Princeton Junction, NJ
2021-2025
GPA: 3.79 UW, 4.23 W
National Honor Society | Red Cross Club | South Asian American Student Association

EXPERIENCE

Purdue Vertically Integrated Project (VIP) Humanoid Robot Team

Mechanical Team Member Aug 2025 – Present

- Contribute to mechanical subsystem design for a full-scale humanoid robot, including CAD modeling (ex. SolidWorks) and structural analysis.

Youth Suicide Prevention Associates – NJ Department of Health

Youth Planning Committee Member May 2024 – Aug 2025

- Designed and implemented curriculum promoting mental health awareness.
- Coordinated students and teaching assistants to foster open discussions.
- Encouraged peer support and community engagement around wellness.

FIRST Robotics Competition, Team 1923 (The MidKnight Inventors)

Mechanical Captain, Robot Operator, Impact Presenter Sep 2021 – May 2025

- Designed and prototyped mechanical subsystems in SolidWorks and Onshape for competition robots. (ex. reverse four bars, swerve drive, etc.)
- Trained 150+ new members in machining, CAD, and lab safety.
- Led pit crew operations and troubleshooting during competitions throughout a season of 3 months.
- Managed \$4,000+ fundraising and represented team in Impact and Outreach presentations.

New York University Langone Hospital

Cardiothoracic Research Intern Jun 2023-Jul 2023

- Observed robotic-assisted surgical techniques and thoracic procedures. (ex. da Vinci Surgical System)
- Conducted research on integrating robotics in cardiothoracic surgery.
- Collaborated with interdisciplinary healthcare teams to optimize patient care.

PROJECTS

Prosthetic Hand | Purdue ASME Biomechanics

Aug 2025 – Dec 2025

- Designed and 3D-printed a functional prosthetic hand using Autodesk Fusion 360, incorporating biomechanical joint motion and tendon-based actuation.
- Iterated designs through prototyping to improve strength, and range of motion.

SKILLS

- Technical: CAD (SolidWorks, Onshape, Autodesk Fusion, NX), Java, Python, HTML, CSS, Robotics, Mechanical Prototyping
- Tools: Microsoft Office, Video Editing
- Soft Skills: Leadership, Project Management, Team Collaboration

AWARDS & ACHIEVEMENTS

- FIRST Dean's List District Championship Semi-Finalist (2024) - *recognized for technical leadership and innovation.*
- FIRST Robotics Competition World Championship Creativity Award (2024)
- FIRST Lego League Mentor Award Nominee (2024)