ARYA HARIA

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Education

University of Texas at Austin Aug 2025 - Dec 2026
MS in Mechanical Engineering - Dynamic Systems and Controls with a Certificate in Robotics *(GPA: 3.74/ 4.00)*

University of Illinois at Urbana-Champaign Aug 2021 - Dec 2024
BS in Mechanical Engineering with a minor in Computer Science (James Scholar & Dean's List) *(GPA: 3.98 / 4.00)*

Work Experience

Zipline - Mechatronics Intern - Avionics Test Engineering May 2026 - Aug 2026
- Owner of Air Data Sensors (Angle of Attack and Pitot Tube) for Development, DVP&R, and Production Testing
- Planned and executed test campaigns - developed Python test apps, Streamlit dashboards, & designed fixtures
- Built company-wide standard hardware testing infrastructure, reducing test setup time from 4 hrs to 15 mins

Graduate Researcher - System Integration & Design Informatics Laboratory Aug 2025 - Present
- Develop a Swarm Manufacturing System using hybrid manufacturing and cooperative 3D printing
- Program a 6 DOF UR5e arm using ROS2 and MoveIt2 to build a conformal FDM Printer
- Investigate the role of LLMs to automate part assembly and bridge the gap between natural language and code

Contoro Robotics - Robotics Intern - NPI Feb 2026 - May 2026
- Owner of hardware, software, and electrical work for the next generation of box sorting robots
- Used Python, Raspberry Pi, Claude Code, and GitHub for building and testing multiple Computer Vision algorithms
- Optimized a box sorting robot algorithm to achieve its task 80% faster and minimize use of compute

Tesla - Mechanical Design Engineering Intern - Manufacturing Automation Team Jan 2025 - May 2025
- Use SolidWorks CAD and FEA to design automation manufacturing equipment with 1000+ part assemblies
- Commissioned over $300K in purchase orders for machined parts and commercial components
- Designed internal standard sheet metal parts, reducing costs by 85% vs. external sourcing

Tesla - Equipment Engineering Intern - Sustaining Engineering Team Dec 2023 - April 2024
- Led a project to design and build an inspection station, projected to reduce scrap worth $200k/year
- Designed and fabricated parts using 3D printing and CNC machining, to minimize production downtime
- Support multiple high-value projects in a fast-paced environment, collaborating with 8 teams

Kohler - Product Engineering Co-op - Advanced Development Team May 2023 - Dec 2023
- Brainstorm, Research, Design, and Prototype concepts for Executive Design Review using Creo Parametric
- Fabricate the concepts in the Model Shop using additive manufacturing, CNC machining, Arduino, and power tools
- Named inventor in a patent for a low water consumption toilet, where I developed 30+ iterations

Siebel Center for Design - Lab Technician Aug 2022 - May 2023
- Assist guests to use machines like Waterjets, CNC Machines, 3D Printers, Woodworking machines, etc
- Build shop projects to demonstrate the capabilities of all the machines in the shop
- Provide tool and safety training and maintain and troubleshoot all equipment

Projects

Automated Basketball Shooting Robot | *Onshape, MATLAB, RasPi, Arduino, Python, C++, Servo, Ultrasonic, IR Sensors*
- Engineered an autonomous robot to independently navigate a court, detect IR targets, and shoot projectiles

Inverse Kinematics algorithms for a 6-DOF UR5e robot arm | *Matlab, Calibration and Registration, Optimization*
- Implemented and simulated robot inverse kinematics algorithms similar to ROS2 MoveIt OMPL Library

Designing and Programming a Drone | *ROS, Matlab, Motion Planning, Graph Theory, Dynamics*
- Designed a drone and participated in a competition to pop balloons through an obstacle course

Sandia National Labs - Semi-Automated Vision Inspection System | *Fusion 360, Raspberry Pi, 3D Printing, Project Management*
- Built an inspection system in a 6" cube capable of capturing images from at least 5 axes - Won 1st place

Wall Climbing American Ninja Robot | *Fusion 360, Creo, 3D Printing, Laser Cutters, MATLAB*

- Built a robot that moved vertically and horizontally between two parallel walls using PVA and DFA Analysis

NotSkyScanner - A flight search engine | *Data Structures, C++, Python, GitHub, Data Mining and Sorting*

- Created a flight search portal using graphs and Dijkstra's algorithm after performing data sorting tasks using python

Rube Goldberg Machine | *Fusion 360, 3D Printing, Woodworking, Design of Experiments*

- Designed and built a Rube Goldberg machine with 10 steps, including an airborne step, with DOE to optimize it

Engineering Consultant - Nanoborne LLC | *SciFinder-n (CAS), Outreach, Chemical Quality Experiments*

- Sourced reputable suppliers and contract manufacturers to boost production as Nanoborne scales in the US

Technical Skills

SolidWorks (CAD + FEA), NX, Fusion360, Creo, ROS2, C++, Python, MATLAB, DOE, 3DP (SLA/FDM), Laser Cutters, CNC

Leadership Experience

Illini Formula Electric - Drivetrain Subteam Member | *SolidWorks, FEA, 3D Printing, Machining, Hands-on shop work*

- Worked on the design and optimization of the upright using Altair Inspire to 3D print it using DMLS

Engineering Open House - External Marketing Director | *Communication, Task Management, Agile Working*

- External Marketing Director for the nation's largest student-run event (over 20k people attend it!)

Adventure Lover | *Backpacker, Solo Traveler, Thrill Seeker*

- Skydived, scuba dived, and backpacked in the Himalayas to a height of 12,250 ft