ASILAH MARYAM

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SUMMARY

Mechanical Engineering student at UCLA with hands-on experience in hardware development, robotics, and automation. Proven ability to lead cross-functional teams and deliver innovative solutions with thorough documentation through internships at Amazon Lab126. Seeking to contribute to cutting-edge product development in the field of robotics by leveraging expertise in CAD, generative AI, control systems, and rapid prototyping.

EDUCATION

University of California, Los Angeles (UCLA), Los Angeles, CA Graduating June 2026

Bachelor of Science in Mechanical Engineering

- Relevant course work: Computer-Aided Design, MATLAB, Statics, Statics and Strength of Materials, Dynamics, Thermodynamics, Fluid Dynamics, Electrical Circuits

American High School, Fremont, CA June 2022

High School Diploma

- GPA: 4.0/4.0 unweighted

SKILLS

- CAD: SolidWorks, Engineering Drawings
- Finite Element Analysis (FEA)
- Machining: Lathe, Mill, Drill press, Tap, Laser Cutter, Plasma Cutter
- Programming: Arduino, MATLAB, Python, Java
- Automation: Arduino-based systems, 4 CDPR configuration
- Web and Graphic Design
- Soft skills: Team Leadership, Project Management, Problem Solving
- Languages: English (Native), Urdu/Hindi (Conversational), Spanish (Conversational)

AWARDS

- **Dean's Honor**: course load of at least 15 units and a grade-point average equal to or greater than 3.862
- **Amazon Future Engineer**: awarded for academic achievement, participation in school and community activities, and future goals
- **Seal of Biliteracy**: awarded to students who have studied and attained proficiency in two or more languages by high school graduation

WORK EXPERIENCE

AMAZON LAB 126, SUNNYVALE, CA — June 2024 - September 2024

Hardware Dev Engr intern

- Developed a suspended automation system using a 4 Cable Driven Parallel Robot (CDPR) configuration, enhancing flexibility in lab testing processes
- Performed mechanical system analysis to ensure structural integrity and optimized performance using MATLAB
- Wrote algorithms and developed code in Arduino IDE, incorporating advanced mathematical and geometric functions to improve speed and path efficiency of payload
- Engaged with multiple suppliers to source servos, pulleys, and belts according to motor and mechanical advantage specifications obtained from mechanical analysis

AMAZON LAB 126, SUNNYVALE, CA — June 2023 - September 2023

AFE Hardware Intern

- Developed a cost-effective automated button-pushing system within $250 for testing Amazon Fire TV and competitor remotes to reduce testing time and provide an alternative to reworking remotes
- Researched and evaluated 4 actuators to identify optimal solution for automation, focusing on cost, durability, and compatibility
- Utilized rapid prototyping through SolidWorks to design and iterate button pusher mechanism, ensuring compatibility with existing testing infrastructure

AMERICAN HIGH SCHOOL, FREMONT, CA — August 2021 - May 2022

Intro to Computer Science Teacher Assistant

- Guided students in constructing circuits on an Arduino, ensuring electronics were wired correctly for robots to function properly
- Explained Robot C logic & graded student code based on assignment specs

LEADERSHIP

ASME X SWE, LOS ANGELES, CA
January 2024 - Present

URC@UCLA Lead

- Co-lead an all women's robotics team of over 40 members in design, manufacturing, programming, electrical, science, and marketing sub-teams
- Facilitated workshops for members to learn how to design, build, wire, and program a model rover to prepare for the 2025 University Rover Challenge

STUDENTS FOR STUDENTS, FREMONT, CA
September 2019 - June 2022

Co-founder

- Co-founded Students for Students, a one-on-one tutoring program connecting elementary and middle school students with high school mentors at affordable rates
- Transitioned program to an online platform in response to Covid-19 pandemic, ensuring uninterrupted learning and expanding accessibility.
- Reached over 100 students through a summer coding boot camp and year-round tutoring sessions in a variety of subjects

VEX ROBOTICS, FREMONT, CA
October 2019 - May 2022

Founder Team 97101W

- Founded an all-girls team at American High due to demand for robotics-related activities and to create a safe environment for girls to pursue robotics, winning awards and qualifying for world championship
- Resolved disputes between teammates by holding meetings to discuss design options and reach compromises to ensure each member felt supported
- Mentored and trained 5 new members in building and programming robot components such as claw and chassis with different functions
- Programmed controller and autonomous for competition using VEX C++

PROJECTS

SUSPENDED AUTOMATION MECHANISM, SUNNYVALE, CA
June 2024 - September 2024

Individual Intern Project

- Created a 4 end cable driven parallel robot carrying a payload of 15lbs in the X, Y, and Z planes
- Increased height test equipment could reach by 50% relative to height reached by floor traveling robots

3LB COMBAT ROBOT, LOS ANGELES, CA
October 2023 - May 2024

Team

- Manufactured a 3lb ring spinner combat robot winning "King of the Ring"

BOXIMIZER, LOS ANGELES, CA
January 2024

Team

- Prototyped a device in 1.5 days for IDEA Hacks focused on cutting down excess waste generated from oversized packages by custom sizing and cutting a box based on an object's dimensions

LOW COST BUTTON PUSHER, SUNNYVALE, CA
June 2023 - September 2023

Individual Intern Project

- Researched, devised, and built a cost-effective automated button pusher for testing Fire TV and competitor remotes to reduce rework time ranging from 2 days to 2 weeks to just a couple of hours of labor

BLUETOOTH SPEAKER, SUNNYVALE, CA
June 2023

Individual Project

- Designed and created a bluetooth speaker with 3 modular units capable of stacking atop each other and spinning in different directions to enhance audio coverage over a wider area than traditional front facing speakers

UNDERWATER ROBOTICS, LOS ANGELES, CA
September 2022 - December 2022

Team

- Designed and constructed a functional rover to travel underwater based on commands sent above ground