

Amira Hassan

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EDUCATION

Bachelor of Science in Mechanical Engineering

Expected Graduation Date: May 2027

University Of North Carolina at Charlotte

- Concentration in Energy Engineering
- Computer Engineering Minor
- GPA: 3.1

Related Coursework

Intro to Engineering Practices and Principles(CAD), Engineering Mechanics/Solid Mechanics, Sophomore Design(Machining)

SKILLS

Microsoft Suite, Creo Parametric, AutoCAD, Solidworks, Manual Lathe/Mill

PROJECTS

Air Engine

July 2024 - Present

- Created 8 parts and drawings to dimension, created assemblies, and mechanism analysis in Creo Parametric and SolidWorks
- Used engineering features and relations so that air engine can be scaled up or down and still be functional for multiple purposes
- Completed rough cuts using band/hand saws, operated lathe to achieve actual length, did conventional milling

Beam Calculator and Construction

March 2024

- Used formulas, references, and functions in Excel to create 40+ beam dimensions and sorted them from least to most deflection
- Constructed a wooden hollow box beam within budget that met design specifications and withstood a 500 lbs center load
- Wrote an in depth memo describing the purpose, calculations, and results analysis for the successful project that won 1st place

Custom Keyboard

February 2024 - July 2024

- Created a prototype PCB with an original layout on KiCad, laid out a schematic to connect footprints, and traces
 - Used AutoCAD to build an aesthetic keyboard case and plate that is appropriately dimensioned with correct tolerances to fit components
 - Ordered SMD components from manufacturer to solder onto PCB once prototype is delivered
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EXPERIENCE

Starbucks

September 2021 - Present

- Demonstrated strong communication and interpersonal skills in conveying training concepts effectively, fostering an inclusive environment
 - Resolved customer concerns and complaints promptly, ensuring a high level of satisfaction
 - Participated in regular team meetings and contributed to a positive and inclusive work culture
 - Provided ongoing mentorship and support to 16 new team members, addressing their questions, concerns, and integration
 - Paid special attention to complex drink orders and instructions to perform maintenance/troubleshoot appliances
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ASSOCIATIONS

Combat Robot Club

August 2024 - Present

- Worked in a team to brainstorm and make engineering drawings to accurately demonstrate an idea
- Designed a battle bot prototype in Fusion360 to be 3D printed and assembled for a competition in December
- Used a decision matrix to determine what type of weapon type and defensive mechanism to use for our robot

SkillsUSA Health Science Knowledge Quiz Bowl - Team Captain

January 2022 - April 2022

- Planned bi-weekly meetings that fit team members schedule and delegated certain topics for each person to master
 - Ensured all dues were paid on time and all members were registered for the event
 - Completed a written exam and quiz bowl and won 1st place in the North Carolina 2022 SkillsUSA Health Science competition
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Upcoming Roles

Hoffman Hydronics

May 2025 - July 2025