Zaen Quaisar

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EDUCATION

Northeastern University, College of Engineering **Boston, MA**
Candidate for Bachelor of Science in Mechanical Engineering, Minor in Sustainable Energy Systems *May 2026*
Relevant Coursework: Thermodynamics, Fluid Mechanics, Material Science, Mechanics of Materials, Statics, Cornerstone, Calculus, Differential Equations, Linear Algebra, Computation & Design, Measurement & Analysis GPA: 3.83
Activities and Honors: reNU, Enabling Engineering, NU Robotics, Dean's List, ASME
Study Abroad: Sustainable Energy, Brazil

Brookfield High School **Brookfield, CT**
GPA: 4.45/4.04 *Jun 2022*
Awards and Activities: Robotics, CT Human Rights Youth Council, National Honors Society, Spanish Honors Society

SKILLS AND INTERESTS

Prototyping and Tools: 3D-Printing (Ultimaker FDM), Soldering, Hand Tools, Power Tools
Design and Testing: SolidWorks, MATLAB, C++, Arduino, On-Shape, OCalc Pro, National Grid GIS
Interests: Woodworking, DJing, Cooking, Skiing, Reading, Tennis, Drumming, Gaming

PROFESSIONAL EXPERIENCE

ControlPoint Technologies Inc. **Rockland, MA**
Mechanical Engineering Co-Op *Jan 2024 – June 2024*

- Designed and enhanced electric power distribution lines across Massachusetts using National Grid GIS and OCalc Pro to optimize electrical flow, improve reliability, and reduce power loss
- Collaborated with engineers, project managers, and field technicians to implement design improvements and ensure compliance with industry standards and safety regulations
- Developed clear and accurate packages of supporting documentation including construction sketches, material lists, environmental assessments, and Digsafe tickets using Microsoft Word, Visio, and Excel
- Conducted thorough field surveys of utility poles and lines across Massachusetts, assessing the condition of existing infrastructure and collecting precise data to be used for detailed design
- Performed structural analysis and load calculations for electric poles, ensuring compliance with NESC safety standards and optimizing the design and placement of power distribution infrastructure
- Completed specialized customer experience training program to enhance communication skills and client interactions

ENGINEERING PROJECTS

Wind Turbine **Boston, MA**
Independent *May 2024 - Present*

- Designing and prototyping a portable wind turbine capable of generating 5V made primarily using recycled materials
- Planned and constructed the turbine's structure by selecting and repurposing recycled wood and PVC available at the university makerspace, optimizing materials usage while maintaining structural integrity
- Fabricated various custom adjoining parts utilizing OnShape and an Ultimaker S3 3D printer, ensuring precise fits, structural functionality, and seamless integration with traditional materials

Biomass Filtering System **São Paulo, Brazil**
Team *July 2024*

- Researched and designed several systems that filter different sized rocks out of sugarcane bagasse using minimal energy and cost to decrease facility stoppages and equipment damage, saving costs and increasing boiler efficiency

Wooden Pergola **Brookfield, CT**
Independent *August 2023*

- Engineered and built a custom wooden pergola using a variety of power and hand tools, transforming a decaying area into a revitalized outdoor space
- Developed a comprehensive design plan, selecting high-quality materials and ensuring accurate measurements and cuts to achieve durability and aesthetic appeal