SAAD BABEZZINE

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SUMMARY

Electrical engineering junior at UMass Boston seeking a summer 2027 internship in power, energy, or MEP electrical design. I studied transformers for my Circuit Analysis II final project, led a team that built a solar power system, and I am now designing and testing a regulated power supply. I am training in AutoCAD Electrical and want to learn how electrical systems for buildings and the grid are planned, designed, and built. More project details are on my portfolio at saadbabezzine.com.

EDUCATION

University of Massachusetts Boston, Boston, MA — Expected May 2028

- Bachelor of Science in Electrical Engineering, junior standing
- Current courses include Electronics I with Lab, Signals and Systems, Engineering Mathematics, Introduction to Electrical and Computer Engineering

Bunker Hill Community College, Boston, MA — May 2026

- Associate degree, Engineering Transfer Program, GPA 3.94
- Completed courses include Circuit Analysis I and II, Digital Logic Design, Differential Equations, Physics I and II

ENGINEERING PROJECTS

Transformer Project, Circuit Analysis II Final Project, Bunker Hill Community College — Spring 2026

- Researched how transformers step voltage up and down using the turns ratio
- Analyzed voltage, current, and power on both sides of a transformer
- Connected what I learned in class to how power actually gets delivered to homes and businesses

Solar Power System Project, Bunker Hill Community College

- Led a team of three to design and build a solar power system, dividing the work and keeping the project on schedule
- Presented the finished system and our results to the class
- Learned that leading means checking in early, matching tasks to people's strengths, and keeping everyone on one plan

Op Amp Amplifier Design and Testing, Electronics I, UMass Boston — Fall 2026

- Built and tested inverting and noninverting LM741 amplifiers, confirming designed gains of 10 and 11 on the oscilloscope
- Measured 3 dB bandwidth at gains of 10, 30, and 100 (86 kHz, 29 kHz, 9.5 kHz) and showed the gain bandwidth product stayed near the 1 MHz datasheet value
- Found the output clipping point and fixed a source loading error by matching the function generator load setting
- Learned that real parts never behave exactly like the ideal model, and how to use the datasheet to explain the difference

Power Quality Harmonic Analyzer, Signals and Systems, UMass Boston — Fall 2026, in progress

- Breaking the distorted current drawn by everyday electronics into harmonics with Fourier analysis in MATLAB and calculating total harmonic distortion
- Goal is to see how much distortion common chargers and LED bulbs put back onto the power line

Regulated DC Power Supply, Electronics I, UMass Boston — Fall 2026, in progress

- Designing a supply with a diode bridge rectifier, filter capacitor, and regulator stage, and testing ripple under different loads
- Goal is to understand every stage between an AC input and a steady DC output

Solar Tracker, Intro to Electrical and Computer Engineering, UMass Boston — Fall 2026, in progress

- Building a light sensor and servo system that turns a small solar panel toward the light, with a mount designed in CAD and 3D printed
- Goal is to measure how much more light a tracking panel collects than a fixed one

EXPERIENCE

UPS, Watertown, MA — Jun 2026 to Sep 2026

- Completed UPS Integrad safety training, passed probation, and ran routes of up to 170 stops a day on strict time commitments

Lab Assistant, Bunker Hill Community College, Boston, MA — Feb 2026 to May 2026

- Helped students set up lab equipment and work through circuit experiments, and kept the lab organized and safe
- Explaining circuits to others made me understand them better and taught me patience when someone is stuck

Amazon, Delivery Service Partner — May 2024 to May 2025

- Ran routes of 350 to 450 packages across 150 to 190 stops, and trained a new driver on the route and station procedures

TECHNICAL SKILLS

- Circuit design and analysis, analog and digital circuits, op amp circuits, AC and DC circuits, phasor analysis, semiconductor fundamentals
- Power systems fundamentals, transformers, electrical design, and technical writing for lab reports
- Laboratory testing with oscilloscope, function generator, digital multimeter, and DC power supply, breadboard prototyping
- CAD, rapid prototyping with 3D printing, AutoCAD Electrical (training in progress), MATLAB for Fourier analysis
- C++, HTML and CSS, Visual Studio, Excel, Word, PowerPoint, safety procedures, and speaking English, Arabic, and French