Aayan Siddiqui

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Highlights of Qualifications

- Fourth-year Electrical Engineering student available for a 4- or 8-month co-op starting January 2027
- Analog circuit and power supply design, simulation and bench validation using MATLAB, PSpice, LTspice and Cadence
- Coursework in energy conversion, control systems, signals & systems and communication systems
- Retail Supervisor leading 10–15 associates per shift, with strong communication and prioritization skills

Education

McMaster University - Bachelor of Engineering, Electrical Engineering (Co-op) Expected Completion: April 2027

Technical Projects

Speech Interference Removal & Active Filter Design February 2026

- Removed a constant interfering tone from a speech signal by evaluating low-pass, band-pass, high-pass and notch filters, isolating the interference with a 700–1000 Hz notch
- Designed and built a second-order Butterworth active low-pass filter for a 1.59 kHz cutoff, sizing op-amp components to set the cutoff and gain
- Validated the hardware response against MATLAB Fourier-series models with oscilloscope FFTs (100 Hz–10 kHz)

3 V DC Power Supply with Bridge Rectifier February 2025

- Designed a supply converting a 120 V RMS source to 3 V ± 0.1 V at 10 mA, sizing a 34:1 transformer ratio, a 1N4148 full-wave bridge rectifier and a 100 µF filter capacitor
- Simulated the design in LTspice and built it on an Analog Discovery 3 with a scaled 4.64 V source
- Measured a 2.92–3.02 V output, within spec, with about 0.1 V peak-to-peak ripple against a 0.2 V limit

Extracurricular Activities

Director of External Affairs – McMaster Formula 1 Club – Hamilton, ON September 2024 – Present

- Lead sponsor outreach and communications, securing funding and promotion from brands including Red Bull
- Coordinated logistics and sponsor activations for 200+ attendee events, strengthening brand-partner relationships

Experience

Supervisor – Uniqlo Co., Ltd. – Burlington, ON May 2025 – Present

- Promoted from Sales Associate to Supervisor in November 2026; supervise 10–15 associates per shift, delegating back-room stock replenishment and sales-floor tasks
- Manage staff scheduling and communicate shift priorities to keep coverage matched to store needs
- Maintained a 96% stock availability KPI by managing back-of-house inventory and prioritizing restocking
- Trained new associates through hands-on coaching, standardizing training checklists to reduce rework

Skills

- **Hardware:** Analog Circuit Design, Power Electronics, Control Systems, Signal Processing, Design Validation
- **Tools:** MATLAB, Simulink, PSpice, LTspice, Cadence, LabVIEW, Python, C/C++, Git, Excel
- **Lab Equipment:** Oscilloscope, Function Generator, Spectrum Analyzer, Logic Analyzer, Power Supply, DMM