

# Marc Anthony El Khoury

## SUSTAINABLE AND RENEWABLE ENERGY ENGINEER

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### Educational History

#### BACHELOR OF ENGINEERING, SUSTAINABLE AND RENEWABLE ENERGY ENGINEERING

Carleton University – Ottawa, ON | September 2020 - May 2025

- CGPA: 9.98/12 (A-)
- Relevant Course Work:
  - Renewable Energy Systems: Solar PV, energy storage, and smart technologies.
  - Electrical Power Systems: Power generation and distribution.
  - Thermodynamics & Heat Transfer: Energy conversion analysis.
  - Systems & Simulation: Developed simulation models for complex systems

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### Relevant Skills

#### TECHNICAL SKILLS

- Renewable Energy Engineering: Expertise in solar PV system design, energy storage integration, and maximum power point tracking (MPPT). Skilled in power transmission systems and sustainable energy solutions.
- Programming & Development: Proficient in C, C++, Python, Visual Basic, MATLAB, Assembly Language, ARM Cortex M programming, RTL, VERILOG, HSPICE and Arduino IDE.
- Engineering Tools: Skilled in Fusion 360, AutoCAD, ETAP, ORCAD, HFSS ANSYS, Cadence, Logisim, Autodesk, Eagle Vision Software, CAD of VLSI Circuits & Systems and LVsim.
- Control Systems: Proficient in root locus analysis, feedback loop design, and control theory for renewable energy and mechanical systems.
- Circuit Design & Debugging: Experienced in CAD, oscilloscopes, soldering, prototyping, circuit debugging, and logic analyzers.
- IoT & Embedded Systems: Hands-on experience with Arduino, servo motor integration, wireless charging systems, and embedded solutions for electric vehicles.
- Networking & Communications: Knowledgeable in 4G/5G networks, 802.11 (Wi-Fi), NFC, and IPTV architecture, with experience applying Metcalfe's Law to optimize network scalability.
- Testing & Analysis: Skilled in ASL 1000 and ETS 88 tester machines, data analysis, and product life cycle management.
- Energy Systems: Experienced in solar thermal experiments, sensor data collection, and performance analysis.
- Microsoft Office Suite: Advanced proficiency in Excel for data analysis, visualization, and technical documentation.

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### Work Experience

#### TEST ENGINEER

Power Integrations Inc., Kanata, ON | June 2022 – Dec 2023

- Developed and coded a test program for HiperPFS-5 advanced power factor correction IC using C and C++.
- Soldered and debugged circuit boards for chip testing.
- Tested chips on ASL 1000 and ETS 88 tester machines, ensuring performance standards.
- Implemented Eagle Vision software for automated testing processes.
- Worked on PLM to release the test program for HiperPFS-5

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## Volunteer Experience

### **ON SITE ASSISTANT**

Oneid Engineering, Ottawa, ON | Jan 2022 – Feb 2022

- Conducted assessments of Chinese equipment to ensure compliance with North American standards.
- Performed unit transformations and created weighted trade studies for machinery sourcing.

### **COUNCIL MEMBER**

Carleton University Students' Association (CUSA) | Feb 2023 – Feb 2024 | Ottawa, ON

- Represented the interests of students at Carleton University, serving as an elected member of the CUSA Council.
- Participated in discussions and decision-making on policies, events, and initiatives affecting the student body.

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## Certifications & Awards

### **TERADYNE**

*Credential ID USA-21919*

ETS-88 ACCELERATED PROGRAMMING(EAGLE VISION MST)