MARIE ANNAËLLE ALISON EMILIEN

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SUMMARY OF QUALIFICATIONS

Passionate and curious engineering student with a strong foundation in MATLAB, Multisim, and HSPICE. I actively pursue practical experiences, conducted tests, and analyzed results to enhance my technical skillsets. My expertise includes designing patterns, programming languages such as Perl, Python, and Verilog, along with proficiency in various software frameworks and game development tools. Known for being detail oriented while also being fluent in French, English, and Mauritian Creole.

EDUCATION

BASc Electrical Engineering and BSc Computing Technology   **2020 – 2026**
University of Ottawa, Ottawa, Ontario
- Expected graduation date: **May 2026**
- Awarded the Differential Tuition Fee Exemption Scholarship

SKILLS

- **Programming Language:** C, Verilog, Python, Java, HTML, CSS, JavaScript, Node.js, React, Bootstrap, SQLite, Perl.
- **Engineering Software:** MATLAB, Quartus II, ModelSim, Multisim, µVision, Arduino IDE, LabVIEW, HSPICE, Cadence.
- **Game and Art programs:** Unity, Clip Studio Paint.
- **Microsoft Office:** Word, Spreadsheet, PowerPoint, Outlook.

ENGINEERING PROJECTS

Public Service Android App Prototype: Novigrad Android Project   **Sept 2023 – Dec 2023**
- Proficiently utilized Android Studio tools to develop a dynamic mobile application featuring distinct functionalities catering to Admins, Employees, and Clients while implementing efficient Design Patterns, resulting in improved functionality and optimized performance.

Water Quality Analyzer Arduino Project - https://youtu.be/vMlDdeUzurE   **Sept 2023 – Nov 2023**
- Leveraged an Arduino UNO board equipped with built-in AC to DC converters to collect data from three sensors: Temperature, pH, and TDS.
- Developed a fundamental website using HTML, CSS, and JavaScript, incorporating Node.js to showcase real-time serial values obtained.

MATLAB Simulations   **Sept 2022 – Present**
- Analyzed and visualized graph patterns to discern characteristics of both basic and filtered signals, along with examining modulated waves and distributions of random signals.
- Employed power signal conversion techniques, between AC and DC, to simulate the operations of a solar-powered house using Simulink.

Electronics Simulations and Lab Experiences   **Sept 2022 – Present**
- Conducted comprehensive testing on optical instruments to grasp the nuanced characteristics of LASERs in diverse scenarios.
- Designed electronic circuits using Multisim, exploring the behaviors of fundamental circuits, transistors, OP-AMPs, and more.
- Employed a suite of testing equipment, including digital multimeter, oscilloscope, and more to assess simulated Multisim circuits.
- Meticulously crafted an Arithmetic Logic Unit (ALU) by integrating logic circuits, employing both Block Diagram and Verilog in Quartus II.

WORK EXPERIENCE

Teaching Assistant – ITI 1500 – University of Ottawa - Ottawa, ON   **Jan 2024 – Present**
- Facilitated the setup and supervision of engaging laboratory sessions, fostering an optimal learning environment for students to master the utilization of Quartus II and Altera tools.
- Conducted comprehensive grading of Lab reports, offering constructive feedback to students for continuous improvement. Recorded and meticulously maintained grade records to ensure accuracy and transparency.

Project Clerk, Pension and Benefits Assistant – University of Ottawa - Ottawa, ON   **May 2023 – Present**
- Employed Excel functions to validate values between the ARIEL database and exported data, to identify potential errors with precision.
- Demonstrated proficiency in Excel to prepare retiree files along with administrative documents, adhering meticulously to the university's archiving process.

SUPPLEMENTARY COURSE WORK

- Currently learning and practicing **Full Stack development** and **Verilog HDL Fundamentals** through Udemy courses: udemy.com/course/the-complete-web-development-bootcamp/ and udemy.com/course/verilog-hdl-fundamentals-for-digital-design-and-verification/

EXTRACURRICULAR ACTIVITIES

Game Prototyping - mischievous-anomaly.itch.io
- Actively participating in Game Jams to delve deeper into my game dev. hobby and expand my creativity skills based on given prompts.
- Sketching out prototypes of gameplay ideas with Unity and Pygame, developed around a 2D character sheet in Clip Studio Paint and Krita.