Theeshiikan A Shanmuganathan

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Highlights of Qualifications

- Currently a third-year Computer Engineering student with a strong foundation in both hardware and software principles.
- Solid foundation in programming basics proven through relevant courses and projects.
- Consistently achieved high academic performance, maintaining a GPA of 3.42.
- Strong communication skills and a team player demonstrated through teaching and mentoring at Code Ninjas.

Skills

- Proficient in programming languages: Java, VHDL, Python, C, C++, Assembly.
- Experienced with development and simulation tools: Quartus, Multisim, MATLAB, UML, Oscilloscopes.
- Familiar with platforms: Windows, Linux, Altera FPGA.

Education

B.Eng. in Computer Engineering — *Toronto Metropolitan University, Toronto, ON*   *2022 – Present*

- **Dean's List** — *2022/2023*
- **Relevant coursework:** Algorithms and Data Structures (C) — Digital Systems (FPGA/VHDL) — Object Oriented Engineering Analysis and Design (Java) — Electronic Circuits (Analog Design) — Microprocessors (Assembly)

Professional Experience

Lead Code Instructor, Code Ninjas

04/2023 – Present, Aurora, Canada

- Completed training in JavaScript to effectively teach children aged 8-14 coding principles.
- Successfully planned and hosted multiple hackathons, open houses, and street events to engage with the community.
- Led a LEGO robotics camp, teaching engineering concepts and coding robots using JavaScript.
- Demonstrated strong communication skills by effectively engaging with students and their parents.
- Collaborated with large teams, ensuring thorough and effective communication.

Projects

MoneyFlow Tracker, JavaFX and Java

- Developed an interactive Spongebob themed GUI for a banking system with multiples screens and Logins
- Implemented functionality for Admins to add/remove customers.
- Enabled customers to log in using a custom username and password, view their previous transactions, balance, and account level and use their money
- Used UML diagrams to plan and organize project structure and functionality effectively.
- **Personal Takeaway:** This project enhanced my problem-solving skills, as it was my first time working with JavaFX. Navigating through the learning curve of a new technology strengthened my adaptability and technical skills.

Projects Continued

2-Stage Amplifier Design (Transistor Circuits), Multisim

- Designed a 2-stage amplifier using BJTs to meet specific gain requirements.
- Simulated the amplifier design in Multisim and with Oscilloscopes to verify performance and efficiency.
- **Personal Takeaway:** This project required precision due to strict design specifications, challenging me to focus on optimization and achieving highly accurate results thorugh multiple stages of trial and error.

General-Purpose Processor Design, Quartus, FPGA, VHDL

- Designed a general-purpose processor using latches, decoders, finite state machines, and an arithmetic logic unit (ALU) to perform simple tasks.
- Coded the processor in VHDL and tested its functionality in Quartus.
- Analyzed logic gates to verify the program's performance and correctness.
- Implemented and verified the design on an FPGA board.
- **Personal Takeaway:** As my first experience with VHDL, this project taught me the importance of seeking guidance when necessary, fostering both technical growth and collaboration skills.

Personal Website, www.kassghayouri.com

- Developed and set up the website from scratch
- Created the different sub categories to professionally organize the website content
- **Personal Takeaway:** As a volunteer project, this experience sparked my interest in web development and deepened my passion for technology.

Toronto Metropolitan University Programming Competition 2024, Python

- Developed a Python-based job-matching platform tailored for disadvantaged individuals, using data analytics to match applicants with suitable job postings.
- Utilized a dataset containing job titles, descriptions, skills required, accessibility features, and other attributes to recommend top 10 job opportunities per applicant.
- **Personal Takeaway:** This was my first team-based project outside of school, and it greatly improved my teamwork and collaboration skills while working toward a common goal.