Smit Bhavsar

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Summary of Qualifications

- Excellent written documentation skills through writing detailed technical reports about hardware, software and experimental changes throughout my time at AMD.
- Displayed strong leadership and oral communication skills through effectively collaborating with members on Ryerson Gujarati Association (RGA) and hosting various cultural events.
- Demonstrated strong problem-solving skills and ability to adapt and work under pressure learning concepts of inheritance and polymorphism in my Object-Oriented Engineering Analysis and Design (COE528) course.
- Ability to manage relationships with others when engaging in teamwork, particularly in interdisciplinary environments.

Technical Skills

Programming Languages: Java, Python, C#/C++, JavaScript, Swift, HTML, CSS, Assembly, Ruby, Perl, Git
Applications: MATLAB, SolidWorks, Fusion360, Multisim, Quartus, Perforce, AutoCAD, GitHub, VS Code
Operating Systems: Microsoft Windows, Linux, Apple MacOS
Hardware Equipment: Oscilloscopes, Function Generators, Digital Multimeters, Soldering Iron, Microscopes, Automatic Test Equipment (ATE), Curve Tracer

Education

(B.Eng.), Computer Engineering
Toronto Metropolitan University (Formerly known as Ryerson University)
CGPA – 3.53/4.33 (A-), Dean's Honour List
Relevant Coursework: Computer Organization and Architecture, Digital Systems, Electronic Circuits, Engineering Algorithms and Data Structures, Microprocessor Systems , Operating Systems, Object Oriented Engineering Analysis and Design, Software Systems, Computer Organization and Architecture

Work Experience

AMD (Advanced Micro Devices)   05/2022 – 08/2023
Silicon Design Engineer Intern

- Improved, modified and maintained a regression system with Perl, Ruby and MySQL used by teams across different time zones to add, update, dispatch and review tests on the latest design.
- Using Python/Ruby and bash scripting, developed an automation script that creates a sim build on a cloud server, transfers build to the specified system, performs regression testing, renames and saves all the log files.
- Reduces manual labor for regression to $\approx$ 0 and increases performance efficiency $\approx$ 200%.
- Used Bash Scripting to automate various regression procedures. The script transfers a sim build to the specified system, performs regression on the system with various verbose, renames and saves all the log files.
- Reduces manual labor and increases efficiency by $\approx$ 1000%.
- Advanced scripting using Perl and PHP to automate several aspects of the test bench, including creating a sanity/regression dashboard "smart" system.
- Developed test cases for verifying the functionality of exclusive features by partnering with SOC and IP teams.
- Trained additional incoming co-op students to ensure a smooth transition to a fast-paced work environment.

Dr. X Academy of Robotics and Coding   04/2021 – 04/2022
Robotics and Coding Instructor

- Instructing classes of 15-20 students on 2D/3D game making using Unity with both text-based coding (such as C# and Python) as well as mobile app development using App Inventor (primarily Android).
- Teaching a variety of robotics classes which included the use of many gyro, light and ultrasonic sensors, one of the topics included simulating Tesla's accident avoidance system.
- Increased the attendance of FTC as well as FLL robotics classes by 10% throughout the summer.
- Educating a small class of 5-7 high school students on Java, including the basic principles of object-oriented programming, inheritance, encapsulation, abstraction and polymorphism.

KGS Research 07/2020 – 10/2020
Call Center Representative

- Making outbound calls to clients regarding surveys on politics, customer-satisfaction, and many more.
- Remain neutral on their opinions, to avoid collecting any skewed or biased data.
- Excellent English communication skills and clarity.
- Experience with CATI (Computer Assisted Telephone Interviewing) Programs.
- Ability to articulate pronunciations of difficult words.
- Fast typing skills, able to input data quickly and accurately.

Projects

Portfolio Website
HTML • CSS • Bootstrap • JavaScript / Visual Studio Code
https://smitbhavsar93.github.io/

- Designed and developed a fully responsive portfolio website using HTML, CSS and JavaScript.
- Also used Bootstrap Framework to incorporate open-source templates for UI Interface elements.

Multi-Stage Buffer Amplifier
NI Multisim
https://github.com/smitbhavsar93/Multi-Stage-Buffer-Amplifier

- Systematized a circuit with a 3-stage 2N3904 transistor configurations with a single-supply that included a multistage, inverting, transistor amplifier to meet electrical requirement.
- Circuit was engineered and designed upon Multisim software for voltage gain, quiescent current and input / output resistance.
- Results were confirmed through the waveforms upon generation.

General-Purpose Processor
VHDL / Quartus II
https://github.com/smitbhavsar93/General-Purpose-Processor

- Constructed a general-purpose processor with the help of 3 different arithmetic logic units (ALU).
- Incorporated Latches, 4-16 Decoders, Moore/Finite State Machines (MSM/FSM), were all used in the creation of the ALU's and the results were all displayed in seven-segment displays (SSEG).
- Downloaded the program on a FPGA board and displayed the outputs on LEDs and 7-segment displays.

Bookstore
Java / NetBeans 8.2
https://github.com/smitbhavsar93/BookStore

- Simulated a bookstore application that had a responsive UI using JavaFX.
- Implemented a variety of user interface functions, such as a login screen, shopping cart as well purchasing buttons.

Leadership Experience

Soccer World Ryerson 03/2021 – 04/2022
Graphic Designer

- Designing 2+ graphics per week, including weekly flyers for upcoming games as well as events and saw engagement rise on Instagram by over 20%.
- Making daily Instagram stories which saw our page rise from 20 followers to 100+ followers within the first 3 months of starting.

Ryerson Gujarati Association (RGA). 09/2020 – 04/2022
Vice President of Technology

- Launched a fundraiser for the COVID-19 crisis in India and collaborated with Brock GSA and Laurier GSA to raise over $1400.
- Monitoring and making a website for the newly formed organization, including finding a suitable domain that fits the needs of the organization.
- Led a team of 5 and increased overall engagement on social media and on our website by 25% in our first year.