Shams Kadri

Toronto, Ontario - Canadian Citizen
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Education

Toronto Metropolitan University (Formerly Ryerson University) **September 2020 - April 2025**
Candidate for Bachelor of Engineering in Computer Engineering *Toronto, Ontario*

- **Achievements and Awards:** Entrance Scholarship, Dean's list (2021) 4.05/4.33 CGPA

Skills

Languages: Python, Django, PyQt, Javascript, SQL, HTML/CSS, MATLAB, React.js, C, C++, Java, VHDL
Technical: Visual Studio, Git, OracleDB, MySQL, JQuery, Linux, CLI, Hyper-V, KVM, Docker, Kubernetes, JWT Tokens, JSP, SOC, PCB, RaspberryPi, Google Cloud, CCNA, Cisco, JTAG, I2C, VMWARE
Network Management: Solarwinds, Aruba Airwave, Aruba Clearpass, Infoblox, Palo-Alto Firewall, ServiceNOW, CyberARK, VPN

Experience

Applications Engineer **May 2024 - August 2024**
The Six Semiconductor *Hybrid - Markham, Ontario*

* Contributed to the **Python** GUI interface that connects to the **SOC** board **PHY** chip to configure, control, and visualize the behavior of the **PHY IP**
* Programmed the new **EEPROM driver** using the **JTAG/I2C** protocol to be used in the new boards in the lab
* Configured and imaged multiple devices with **Linux** to be used over **VPN** to show multiple stakeholders the GUI to visualize the PHY for marketing
* Worked on **PCB** validation and **ESD**/smoke testing for the boards
* Created and ran **python** test scripts to make sure that the GUI can correctly read from the **PHY** chip
* Troubleshot power issues with the **PCB** and RaspberryPi using an external power supply and **oscilloscope**
* Reflashed approximately 90 RaspberryPIs and migrated all the lab devices to a new server/active directory using a **python script**
* Created lab and code documentation for lab devices to make sure that future users will be brought up to speed on how to operate the equipment, navigate the codebase, and run scripts correctly

Network Engineer - PEY Co-op **May 2023 - April 2024**
AMD (Advanced Micro Devices Inc.) *Hybrid - Markham, Ontario*

* Troubleshot over 350+ incidents to help build relationships with multiple departments to improve customer experience
* Documented all incidents and projects I have worked on for future reference and ease of information for repeated incidents
* Assisted the senior engineers for the wireless only piloting plan for a test floor for future transition to complete wireless
* Deployed 40+ new **Aruba** switches into production for the datacenter, lab, and end of life Cisco switches
* Collaborated with senior engineers for new plan to separate enterprise and lab network and supervised contractors for installing new APs and new cabling.
* Participated in **P2/P1** major incident calls and escalated major incidents
* Designated as primary network engineer/support for the massive AMD Markham Data Center
* Assisted a team from Santa Clara to set up the network for 4 **server** rack clusters.
* Created change requests to communicate, document and implement plans for changes that will affect the business.

Software Developer - Internship **May 2022 - August 2022**
Teacher App (TAPP) *Remote - Toronto, Ontario*

* Created multiple pages (front-end) such as: contacts page, profile page, posts page using the **ReactJS** and **MaterialUI** library and helped implement the back-end database
* Utilised **ReactJS** and **SCSS** to implement designs for the company's web application that were given by a UX/UI designer
* Helped implement the backend of the **post/fourm** page of the web app using **PostgreSQL** to store the postings and likes, and **SCSS** to style the page to my superior's liking

Projects

16 Bit Microprocessor | *VHDL, Quartus*

* Using **Quartus II**, designed and built a virtually simulated **microprocessor** that could perform several operations using two user inputted numbers
* Used a **finite state machine**, **logic gates**, truth tables, and K-maps to design the components for each function
* Utilized **VHDL** to code and program the designed components of the processor

Full Stack Anonymous Forum Website | *MySQL, Java, JSP, JWT Tokens, Kubernetes, Docker, OOP - Object Oriented Programming*

* Developed a forum page where university students can anonymously share posts to different university pages
* Utilized **JWT tokens** to save session information to verify requests
* Used **Kubernetes** to implement synchronous messaging between different **microservices**, packaged the application on **Docker**, and hosted the website on **Google Cloud's** Kubernetes Engine

Music Rating Database | *OracleDB, SQL, Python*

* Created the **database schema** for the music rating database from scratch
* Implemented the database using **OracleDB**, and added dummy values for the database tuples, and used **bash scripts** to **automate** table and query creation
* Implemented the **UI** in the form of a web application using **Python** to connect frontend and database backend

Projects

Personal Website | *React.js, Javascript, HTML/CSS*

- Developed a website from scratch in VS Code by self-teaching basic **HTML**, **CSS** and **React** properties to display my resume, projects, and contact information
- Formatted all sections to effortlessly add and change information for future modifications, and used **props** to make it modular

Bookstore Application | *Java, JavaFX, OOP - Object Oriented Programming*

- Designed a bookstore application using **Java** and JavaFX that could be used to purchase books, to add books, and to add or remove customers
- Implemented a password verification system using Java's file reading/writing capabilities to differentiate between customer and owner logins
- Utilized **state design pattern** in order to implement a points-based membership system for customers
- Employed **singleton design pattern** to create a single instance of the two files which were used as the databases that contained information on books and customers

Flight Booking System | *Java, OOP - Object Oriented Programming*

- Used **Java** to design a simple flight booking system that used the console to allow the user to create/book flights
- Used **polymorphism** in the form of parent and child classes to create a system where users can get discounts depending membership status
- Implemented error checking in order to keep the program running smoothly
- Made the project modular, allowing for easy troubleshooting, further improvement, and the implementation of new features

RLC Circuit Solver | *Java, JUnit*

- Developed an application using **Java** that was able to solve for either voltage or resistance of a circuit given voltage sources/resistors with corresponding values and the nodes that they are connected to.
- Collected desired data from user input and implemented a "spice" command that formatted the data to a neater form.
- Project can potentially be modified to solve for more complex circuits.
- Used **JUnit** to test some of the classes.

Line Following Robot | *Assembly*

- Using **assembly**, programmed a robot to follow a track and reach the end.
- Made use of inputs from sensors to detect the line that the robot was following and bumper buttons to detect dead ends then implemented a program using **assembly**.
- Project can potentially be modified to solve for more complex circuits.
- Developed an **assembly** program that was able to make use of sensor inputs in order to navigate the track. Made use of interrupts and subroutines.

Relevant Courses

Coursework

- Algorithms and Data Structures, Object Oriented Analysis Design, Database Systems I, Electronic Circuits I, Computer Programming Fundamentals, Digital Computation and Programming, Electric Circuit Analysis, Software Systems, Digital Systems, Electric Networks, Microprocessor Systems, Computer Organization and Architecture, Operating Systems, Software Requirements Analysis Specifications, Software Design Architecture, Advanced Algorithms, Embedded Systems Design, Digital Systems Engineering, Software Project Management, Digital Systems Engineering, Computer Networks, Intro to Computer Vision