Ramtin Alikhani

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SUMMARY

A skilled and adaptable professional with expertise in diverse technologies and programming languages. Proficient in operating systems including Linux, and Windows. Experienced in programming with C/C++, JavaScript, and Python 3, as well as scripting with Bash, HTML, PHP and CSS. Well-versed in database management using MySQL and MariaDB, and adept at utilizing a wide range of tools including Confluence, Jira, Jenkins, Github, Git, Altium Designer, Multisim, MATLAB, Keil uVision 5, Ultiboard, and data structures and algorithms in C and Python 3. Additionally, skilled in hardware development with STM Microcontroller, RS232, CAN Bus, and FSK Modulation, and proficient in system configuration using PuTTY.

WORK EXPERIENCE

Ciena, Ottawa, Ontario

***Embedded Systems Software Co-op**, Aug 2021 – Dec 2021*

- Upgraded the 6500 docker image from an older Linux Kernel to a newer one, enhancing system performance by 25% for the stakeholders.
- Updated and installed newer Oracle packages with Python and Bash, improving system compatibility and functionality.
- Published all procedures utilized in projects on Confluence, ensuring transparency and easy access to information.

Conestoga College, Kitchener, Ontario

***Capstone Project**, Jan 2021 – August 2021*

- Orchestrated the end-to-end development design of a customized website from scratch using HTML, CSS/Bootstrap, JavaScript, and PHP, ensuring seamless user experience and efficient data visualization.
- Led the creation of a wireless equipment-monitoring system, gathering data from sensors measuring various parameters. Estimated data from numerous sensors across machines.
- Oversaw full-stack development, including website design, back-end solutions, and database setup. Implemented live data analytics with Google Data Studio.

Conestoga College, Kitchener, Ontario

***Software Engineering Student**, April 2021 – August 2021*

- Developed an open-source version of the Google Chrome Dinosaur scrolling game from scratch using the PyGame package in Python.
- Implemented the N.E.A.T. (NeuroEvolution of Augmenting Topologies) algorithm for unsupervised learning into the game, enhancing its performance and adaptability.
- Led a collaborative project team, effectively delegating tasks, managing team members, and coordinating efforts, resulting in successful game development and algorithm integration.

Conestoga College, Kitchener, Ontario

***Remote Elevator Project**, May 2020 – August 2020*

- Enabled remote elevator control via a website, employing Full-Stack development in Python, PHP, SQL, HTML, CSS, and Javascript.
- Deployed servers using Raspberry Pi 3 and integrated the website using XAMPP. Estimated a 20% reduction in server setup time.

- Programmed STM32 Nodes to implement CAN 2.0A (CSMA-BA) protocol for network integration.

Conestoga College, Kitchener, Ontario
***Embedded Systems Robot Project**, Sept 2019 – Dec 2019*

- Designed and validated a PCB using Altium Designer 19 for an STM32F303 "Nucleo" microcontroller and 6 modules, ensuring signal integrity and thermal calculations.
- Integrated PCB into robot over 3 semesters, programming via Linux computer. Developed Xbox controller receiver, showcasing Linux proficiency, controller programming, and Agile project management.

Conestoga College, Kitchener, Ontario
***Embedded Systems Robot Project**, Sept 2019 – Dec 2019*

- Led the design of a Mono Audio Amplifier with a transformer-based power supply PCB and a 110 Volts RMS push-pull Amplifier, managing voltage, current, and differential amplification.
- Conducted precise inductance testing and utilized Tektronics MSO 2024B oscilloscope and Tektronics AFG2021 function generator for accurate measurements. Ensured safety through meticulous AC wall plug wiring and 110 Volt RMS testing.

Blackberry-QNX, Ottawa, Ontario
***Safety/Security Development Co-op**, May 2019 – Aug 2019*

- Engineered Regression Testing with PyTest suite in Python 3, improving test efficiency by 20%.
- Installed and configured recreations of software production environments to allow testing of software performance, enhancing software reliability by 15%.

Conestoga College, Kitchener, Ontario
***Coded Messaging System**, Sept 2018 – Oct 2018*

- Designed, validated, and manufactured a PCB for an STM32F303 "Nucleo" microcontroller and 6 additional modules using Altium Designer 19 and achieved 100% functionality through rigorous testing.
- Integrated the PCB into a robot chassis over three semesters, programming it via a Linux-based computer. Developed a wireless Xbox controller receiver using Linux, PuTTY, and Embedded C with Keil uVision 5.

EDUCATION

Bachelor of Engineering, Electronics Systems Engineering Degree - Conestoga College, Kitchener, Ontario (Dec 2021)

TECHNICAL SKILLS & TRAINING

- Operating Systems: Ubuntu Linux, Oracle Linux, Kali Linux, Windows 7/8/10.
- Programming Languages: C, JavaScript, Python, VHDL
- Scripting Languages: Bash, HTML, CSS.
- Databases: MySQL, SQL, MariaDB
- Tools: Atlassian Confluence, Jira, Jenkins, Github, Git, Altium Designer, Multisim, MATLAB, Keil uVision 5, Ultiboard, Data Structures and Algorithms, STM Microcontroller, RS232, CAN Bus, FSK Modulation, PuTTY, Embedded Systems Design, Software development lifecycle, software engineer, IO, CI/CD, version control, computer science, Agile Methodologies, SCRUM, hardware validation.