Kristina Isabelle M. Cortez

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Work Experience

NRT Technology Corp   Toronto, Ontario
Junior Payments QA Analyst   Jan. 2023 - April 2023, Sept. 2023 - Dec. 2023

- Developed a dynamic **Python** program organizing financial statements between banking customers, modernizing their **AWK** script functions.
- Implemented my Python program into their **Linux** TEST environment with the use of **Auto Py to EXE** library, making it accessible to all developers.
- Developed queries in **MySQL** to access POS and ATM transaction data in a **Linux** system, discovering bugs **50%** faster.
- Implemented exploratory testing with audit files to validate elements returned from EMV chips and magnetic strips, resolving various bugs.
- Reported bugs and fixes on **Jira** to track company's progress with each updated version to reach product launch **30%** faster.

Toronto Liver Centre   Toronto, Ontario
Patient File Manager   June 2022 - Sept. 2022

- Directed a team of 8 individuals to complete over **1000** file transactions.
- Organized and managed patient documents through a healthcare database.
- Formulated and implemented a work strategy in order to maximize efficiency, creating file organization **50%** faster.

St. John Paul II   Toronto, Ontario
Peer Tutor   Sept. 2021 - June 2022

- Conducted one on one tutoring sessions with high school students of all grade levels in mathematics and science.
- Monitored their progress through reflection sessions to ensure improvement within their course, found a minimal improvement of **10%** in **100%** of my tutees.
- Effectively provided unique explanations of subjects based on the student's learning style.

Projects

[Sky Diary](#) *HTML, CSS, JavaScript, React, Firebase, MaterialUI*   April 2023

- Implemented **CRUD** operations using Firebase, allowing diary entry manipulation, and account creation/deletion.
- Connected **Firebase Authentication** to **Firestore** to create personal databases for users to store all entries.
- Manipulated **Material UI** component to retrieve users entry for corresponding inputted date.

Traffic Light System *VHDL, Intel Quartus Prime*   July 2023

- Programmed a microcontroller using **VHDL**
- Created a Moore state Machine to transition between different traffic lights in an intersection
- Used buttons to implement a pedestrian crossing, LEDs to represent current state, and a 7 segment display to show the current stop light

Toyota Innovation Challenge *Python, OpenCV, Orbbec Astra SDK*   May 2023

- Programmed a system which uses machine vision to inspect the quality of Toyota's automated sticker application.
- Utilized the **OpenCV** library to analyze stickers using depth detection, shape detection, and hough transforms.
- Interfaced an Orbecc Astra camera for realtime image processing.

Water Contamination Detector *C++, AutoCAD, KiCad, Git, Jira* Nov. 2022

- Utilized the I2C interface to allow for an STM32 microcontroller to transmit data to or from a PH sensor and light sensor, and an LCD display.
- Programmed communication between the serial peripheral interface and the hardware abstraction layer to output information on the lcd display.
- Designed schematics and built a circuit that simultaneously connected the microcontroller with three devices.

SKILLS

Programming Languages: C++, CSS, GNU Octave, HTML, Java, JavaScript, MATLAB, Python, VHDL
Technologies/Frameworks: Firebase, Git, Linux, MongoDB, Material UI, OpenCV, PyGame, React, Spring, Unity, Unreal Engine, Vaadin
Developer Tools: AutoCAD, COMSOL, Eclipse, GitHub, Intel Quartus Prime, VSCode

RELEVANT EDUCATION

University of Waterloo Waterloo, Ontario
Candidate for BAS Computer Engineering Sept. 2022 - Present