

Vanshika Lal

0211422041 | vlal080@aucklanduni.ac.nz | [My Portfolio](#)

Objective

To obtain an entry-level position as a computer systems engineer, allowing me to utilize my education and internship experience while gaining valuable work experience in a team orientated environment.

Skills Summary

PROBLEM SOLVING

I am a strong logical thinker, with a creative bent. When faced with a problem, I will investigate the underlying cause and seek out possible solutions. My problem-solving skills have helped me succeed in the academic and work setting, some examples include solving linker issues, and creating c++ extensions using QObject.

SELF-DEVELOPMENT

I like to have the tools I need to solve problems! Which includes seeking out and developing new knowledge and skills. I frequently sought out mentoring from colleagues and engaged in private study. In my spare time I work on projects as part of my ongoing self-development.

Education

BACHELOR OF ENGINEERING WITH HONORS | 2019 - PRESENT | THE UNIVERSITY OF AUCKLAND

- Major: Computer Systems Engineering
- Accomplishment : Best Presentation (Design Paper 115, Semester 1)

SECONDARY EDUCATION | 2018 | PAPATOETOE HIGH SCHOOL

- 2018 – Passed level 3 with Excellence Endorsement
- 2017 – Passed level 2 with Merit Endorsement
- 2016 – Passed level 1 with Excellence Endorsement

Experience

SOFTWARE ENGINEERING INTERN | FTEK | 2021 – 2022

At FTEK I developed an HMI (Human machine Interface) using Qt Creator, for a greenhouse robot.

- Implemented UX and UI using QT.
- Implemented a polished user interface.
- Worked in an Agile environment.
- Shared knowledge among team members.
- Did a bit of battery terminal crimping.
- Implemented my own libraries in c++.
- Developed the graphical user interface using Qml, JavaScript and c++
- Worked with a software developer to create a point cloud in c++ for the HMI.

- Used the operating system ubuntu to develop the HMI.
- Learn't how to use cmake and qmake.
- Project management using Gitlab and Git

IT SUPPORT | CRPLIFESAVER | 2021 - PRESENT

At Cprlifesaver I created a report generator which can be viewed [here](#)

- Developed a report generator in Excel using Visual Basic
- Developed a dashboard using Google Data Studio
- Constructed a technical system document to derive business insights.
- Project management using GitHub

TECHNOLOGY TUTOR| BRAIN PLAY | 2021 - PRESENT

- I manage classroom behavior.
- I taught kids JavaScript, robotics, 3D printing, Blockly, Coffee script and Python.
- I reviewed class material and helped students solve problems creatively.
- I identified individual development needs and implemented customised coaching and mentoring to help students master new skills.
- Taught kids of different ages ranging from 5 – 15 years of age.
- Maintained equipment and regularly perform quality and functionality assessments; requisition new hardware and software as needed.

RETAIL SALES ASSISTANT | COTTON ON | 2019 - PRESENT

- Greeted customers within one minute of arrival into the store.
- Answered queries from customers.
- Performed cleaning and housekeeping duties.
- Replenished stock on displays.
- Operating the point-of-sale system and handled sale transactions.
- Performed end of day duties, which involved reconciling drawers and banking cash.

MCCAFE BARISTA | MCDONALDS | 2018 - 2019

- Maintained general store cleanliness.
- Proactively participated in meetings and helped create new practices.
- Handled customer complaints with empathy and composure.
- Provided excellent and efficient customer service.

Technical Projects

HANDWRITING RECOGNISER (PYTHON)

- Designed and built a program that utilises Machine Learning to predict drawn digits from the user.
- Implemented 2 models trained with MNIST dataset : Linear Regression and CNN (Convolution Neural Network)
- Used PyQT5 to design the user interface.
- Generates and stores a probability matrix.

FLAPPY BIRD (VHDL)

- Built a Flappy Bird game using a DE0 board as the game console, a PS/2 mouse for controls, and a VGA screen.
- Implemented two operation modes, training mode and single-player game mode.
- Implemented, simulated, and synthesized components and identified elements of the data path and the control unit.
- Implemented design with regards to the resource utilisation and timing performance.

RENTAL MOVIES APP (JAVA & ANDROID STUDIO)

- Implemented a Data Provider class which was responsible in simulating fetching the data from a database.
- Implemented the app providing user experience (UX). Improved the UX of the app by adding animations and transitions.
- Ensured that the app is responsive and resizable.

Technical Skills

- Python, C,C++,C#, Java, HTML, CSS, JavaScript, QML, VHDL , Excel VBA, JPA Hibernate, and MATLAB
- Visual Studio Code, Android Studio , Atmel Studio, Arduino, Autodesk Inventor (CAD), LTspice, Proteus, Altium and RStudio
- Data Structures and Algorithms, Object Orientated Programming, Machine Learnings, Designing Thinking, Project Planning, Risk Management, Intercultural Communication.

Interests

I have an interest in reading and listening to crime related podcasts, which is also why I'm a part of the mystery club at the University of Auckland. Over lockdown, I read over 10 books and my favorite author is Chris Carter. I'm also learning how to roller blade!

References

Bailey Hughes – Brain Play Owner

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James Currie – Director at FTEK

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