Elbert Ng

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EDUCATION

University of British Columbia, *Bachelor of Applied Science, Computer Engineering* Sep 2018 – Apr 2023
Studied as a Computer Engineering student in the University of British Columbia. (**GPA: 3.7/4.33**) Vancouver, Canada

- Earned scholarship for International Students ($25,000 CAD)

SKILLS

Programming Languages:
C, C++, C#, Java, Python, Javascript, HTML/CSS, SQLPlus, Matlab, Julia, Verilog, SystemVerilog, R, Assembly

Libraries/Tools:
Unity, Node.js, React.js, Tensorflow, Keras, PyTorch, NumPy, OpenCV, Confluence, Figma, Adobe XD, Slack

PROFESSIONAL EXPERIENCE

IM/IT Project Assistant, *BC Children's Hospital Research Institute* Oct 2022 – Apr 2023
[Confluence] Vancouver, Canada

- Revamping the BCCHR ResearchHub "How-to" webpage to make it more user-friendly using Atlassian's Confluence tools.
- Reconstructing the BCCHR Support portal to make it more helpful using Atlassian's Confluence tools.
- Managing onboarding and offboarding tickets with ManageEngine.

PROJECTS

Kaede, *Discord bot* Oct 2019 – May 2020
[Javascript, JSON, node.js, Discord.js]

- Used the Discord.js module in node.js to utilize most of the functions.
- Music is played by parsing a video link out of a YouTube search page, and then converted into a M3U8 file to be streamed.
- Playlists can be created by storing the data of a user into a JSON file. (NoSQL database)
- Minigames are also available, mostly operated by rand functions.

The Animal Guardian (TAG), *A chip designed to conserve wildlife* Jan 2021 – Apr 2021
[C, Python, Verilog, SystemVerilog, Assembly, Tensorflow, Keras]

- Implemented a custom HPS/FPGA system on DE1-SoC.
- Human detection system is modeled using a DNN which is trained using 250 training images that has an accuracy of 70%.
- Images are captured using a RaspberryPi and are sent to the DE1-SoC remote server through bluetooth.
- Data is stored in Cloud (DynamoDB) through AWS.

Retro 2D game, *Story-based game in a medieval setting* Oct 2020 – Dec 2020
[Unity, C#]

- Game is created using the Unity game engine 2D tools
- Character movement and animation scripts are written in C#
- Character and background sprites are hand-drawn by other collaborators.

Auto Snake, *Snake game with ML* present
[Python, Pytorch, Keras]

- Aiming for a deep Learning Neural Network with at least 85% accuracy.
- Using the HaGRID dataset with 552,992 images of 18 different hand gesture to train the DNN.