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YONGQUAN ZHANG

EDUCATION

University of Alberta

BSc in Computer Engineering
Software Option Co-op

Links

LinkedIn:
https://www.linkedin.com/in/johnzhang27/

Github : https://github.com/johnzhang27

SKILLS

- Programming: MATLAB, C++, Java, Python3, CSS, JavaScript, NXP Coldfire.
- Equipment: Hand, Computer, Tidal Simulator, Glue Gun.
- MS Office: Excel, Word, PowerPoint.
- Google apps: Sheets, Slides, Docs.
- Other apps: Logger Pro, Photoshop, Qt Creator, Github, Slack, Qt Designer, Flash, MongoDB, MySQL, Atom, Visual Studio Code, MATLAB.

EXPERIENCE

Software Team Member
AlbertaLoop Project   Sep 2019 – Present
- Participating in the software team and working on designing GUI and control systems.
- Built a personal version of GUI by using PyQt5 and Qt Designer. Used Single Inheritance method to link different classes.
- Constructed a QML speed gauge.
- Constructed codes for a circular buffer.
- Currently working on the CANBus and QUIC protocol design.

Engineering Intern   May – Aug 2019
Drilling Technology Research Institute, DongYing, ShanDong, China
- Built a basic 3D graph of Oil platform in a 4-people group.
- Operated a Tidal Simulator to test small models of Oil platform and collect data.
- Analyzed data by using Excel, for example, create a table for water pressure and calculated mean, median, standard deviation and etc.
- Analyzed offshore corrosion data by using MATLAB.

PROJECTS

Web Crawler
This is a simple Python web crawler that could fetch COVID-19 cases information from https://www.alberta.ca/covid-19-alberta-data.aspx and then store those data to a MySQL database. Future plan: Planning to use JavaScript and MySQL database to create a visualized histogram to show the change of COVID-19 cases.
Paintball
Paintball is an Arduino game that allow use to fight evolving enemy block. It used Genetic Algorithm to generate random movement patterns.
Driving route finder
Driving route finder is a C++ program that allow users to find the shortest path between 2 selected restaurants on an Edmonton map.
Huffman Tree
Using Huffman tree structure to display a picture of David A. Huffman on a given website.
Arduino RSA Encrypted Communication
Using RSA encryption method to communicate between 2 Arduino. All keys are generated randomly by determining the voltage flow on a pin of Arduino board.
Meme SlackBot
A custom SlackBot that could tell random memes.
AlbertaLoop_GUI
This is my personal version of GUI created by Qt Creator and Qt Designer. Be sure to download PyQt5 before executing the .py file.