Yunhao Ni

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Occupation Ambition : Front-end Development Engineering

Education Background

Wash U (Master Degree) **St. Louis , Missouri**

M.S. IN COMPUTER SCIENCE *08/2021 - Ongoing*

Relevant Course : Rapid Prototype Development and Creative Programming, Video Game Programming, Software Engineering Workshop, Mobile Web Development, Artificial Intelligence, etc.

Miami University (Bachelor Degree) **Oxford , Ohio**

Computer Engineering/Electrical Engineering *09/2016* - 06/2021

Relevant Course : Java Programming Design, Object-Oriented Programming, Operating Systems, Data Abstractions & Structures, Electronics, Systems Programming, Circuit Analysis, Mathematics System Analysis ,Data Structure ,Thesis on Applied Statistics and Probability , Foundation of Programming Design and Solution , Principle of Microeconomics , Differential Equation , Artificial Intelligence , etc.

Technical Skills & Self-Evaluation

- Programming skills: Java, Python, C JavaScript.
- Software/Tool: AWS, Git, Unity, Vscode, Arduino, Linux.
- Web Development: HTML+CSS, React, AJAX,Vue,NodeJS.

Internship Experience

School of Electronic Engineering and Computer Science of Beijing University **Beijing, China**

Neural Network and Deep Learning Trainee *07/2019*

- Responsible for thesis retrieval and data sorting , combining with research results to demonstrate the concept of neural network.
- Realized the problem of initialization of the CNN parameter as well the normal function , increasing the ACC to 98%;
- Responsible for the test of logical digression, gradient decrease, computing vectorization, etc.

Jinxiang Guangdian Photo-electricity limited Liability Company **Chengdu, China**

CMOS Chip Analyst *07/2020*

- Project Innovation Highlight: multiplying python instead of VHDL to realize Sensor simulation.
- Independently responsible for the analysis of sensor simulation code.
- Applied python for the sensor simulation, simulating the fluctuation of three variables - gain (sa1,sa2), exposure (second) ,temperature in the model.
- Responsible for setting up analog, Aclam, ADC, Img Arra, digital and ISP models.
- Brainstorming the Bayer Algorithm of RGB, implementing the Bayer format interpolation red and blue algorithm.
- Responsible for statistical data, plotting and data outputting in the process of simulation.

Campus Experience

Mobile App Designer **Wash U, Missouri**

Front-end and back-end development *01/2022 - 05/2022*

- This app project has been well designed and established on the expo with react as the front-end web and Firebase as the back end. It targeted at promoting social intercourse among dogs and people when encouraging all the users register and post their dogs' photo, illustrating what date they would be looking forward to their dogs' playing with others on site in their home page. Over here some users could collect each other's home page link and give likes to the moments they shared in activities they launched while clicking on the launchers' avatar to visit their personal page for concrete contact information, brief self-introduction as well the moments posted, which helped building a channel for further interpersonal communication by an information bar especially designed to receive receive readers' advice. After that this App has been designed allowing users editing their avatar and name, combining the function of we-chat, moments and social intercourse for chat ,highlight shared and the arrangement of the appointment date.

UAV Network based on multi-agent reinforcement learning **Miami University, Ohio**

Research Assistant under the guidance of Supervisor Professor Ran Zhang *08/2020 - 11/2020*

Research Objective : Adopted a multi-agent reinforcement learning approach to allow UAVS training in a dynamic way.

- Randomly placed four drones to detect as many people as possible within a certain range. When a person was detected, a reward value would be granted to the drone. Afterwards listed four densely populated spots, it was found that four drones appeared over the four spots while the largest number of people on the map were detected in these four spots. And when the number of self-training times increased to1000 person times, the reward value tends toward stability and the results would begin to converge.

Lego Robot **Miami University, Ohio**

Designer under the Supervise of Doctor Jeff Herdtner *01/2019 - 05/2020*

- Responsible for designing the sensor installation scheme to assemble the robot , downloaded it to NXT through the Arduino Editor.
- Applied the touch sensor for trigger judgment and employed the ultrasonic sensor to measure the distance to the target.
- Optimized the edge determination module of the playing field by applying if/while loops for extensive testing.

Nes Game Controller Development **Miami University, Ohio**

Developer supervised by Dr. James Leonard *01/2019 - 09/2020*

- Responsible for technical documents drafting and basic models building based on system requirements analysis.
- Adopted VHDL to develop the main program, connected all electronic circuits through Quartus II, and multiplied the frequency divider to detect the response speed.
- Integrated the code and optimized the algorithm based on considerable number of test results.
- Converted code to image for display on HDMI screen.