Luis Carlos **Talhado**

Robotic Software Engineer · ROBOTICS ENTHUSIAST

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Summary

I am an ambitious and highly motivated individual who possess a strong work ethic and is confident communicator also great team worker with the ability to take on individually set tasks plus willing to go to great lengths to ensure that task is fulfilled efficiently, thus ensuring all essential details are covered also I am currently seeking to gain some experiences and practical skills that can add to his currently existing list.

Education

De Montfort University

Leicester, UK

M.S.C in Intelligent systems and Robotics (With optional 1 year placement) *Sep. 2019 - PRESENT*

- Currently doing masters and these are the Modules that i am currently doing:
- Artificial Neural Networks and Deep Lear
- Applied Computational Intelligence
- Computational Intelligence Optimisation
- Natural Language Processing based
- Fuzzy Logic
- Intelligent Mobile Robots
- Research Methods

De Montfort University

Leicester, UK

B.S.C in Intelligent systems *Oct. 2016 - July. 2019*

- 2nd Class Lower.

Personal Projects

Mobile Robotics

Using C++ Aria and SFML

- I developed a Mobile Robotic application using two Frameworks called ARIA and SFML. So initially, I created A* algorithm for the robot's mapping function however the main method the robot used to find its current position was the uses of its sensors which were built into the Aria framework. Furthermore with the use of SFML and Aria I was able to use both frameworks to ultimately have the robot draw its surrounding using its sensors whilst having the ability to draw a real-time accurate image of the map or in some cases obstacles that lay ahead of it.

NLTK Chatbot

Extended a neural network model using pytorch(Google Colab) *September 2020*

- I had to build on top of a current neural network model for a chatbot which is using the nltk framework with the addition of pytorch as supporting library for the development of that project. Also I trained the neural network and implemented of different neural network model such as Recurrent Neural Network (RNN) ,Convolution Neural Network(CNN) and Multi-layer perceptron (MLP) plus used many different techniques of testing the accuracy of the chatbot and one of these techniques were bleu_{score}.

Robotic Arm Simulation

using Processing 3 and Creo PTC/Java

- I created a Robotic Arm Simulation for final year project for university using graphical simulator and Creo PTC which is CAD software used by mechanical engineers to design components for their projects. Therefore I created a CAD model for my robotic arm simulation so that i could import the components from CAD into the Processing 3 IDE after which I then created a physics engine within the application which gave the arm a realistic dynamic movement so that it could operate just like its real world counter apart.

Optimisation

using Java

- During my masters my CIO(Computational Intelligence Optimisation) module which was programmed in Java. We had a series of algorithms that we needed to implement and these algorithms were Scweffel, Sphere, Rastrigin and Michalewicz functions henceforth throughout this module had to implement different optimisation algorithms that were related a specific problems and some those algorithms were Single Particle Optimization, Particle Swarm Optimization and CMA-ES(Covariance matrix adaptation evolution strategy).

Image Classification of fruit

Using TensorFlow(python)

- This project entailed the creation of a image classification application that used a Convolution neural network(CNN) as the main architecture of the model. The method used to split the dataset was 70 percent of the data was used for training and the other 30 percent was used for testing to ensure that overfitting of the data would not occurred during training of the neural network model. Furthermore, data collection was process used during the development stage of the project whereby I created my own dataset also I cleaned the dataset to ensure all images were the same size with the addition of categorization of images in my dataset moreover; I validated my data to ensure that model did not train all the data available .

Extracurricular Activity

De Montfort University Global/Faculty of Technology Dublin *Silicon Docks*

PARTICIPANT *JAN.2019- FEB.2019*

- Selected for a competitive academic led trip.

De Montfort University(Robotics Club) *Leicester , UK*

Member *Oct. 2017 - July. 2018*

- To enhance my knowledge about the inner-workings of robot and also furthering my knowledge about Artificial intelligence systems and process such as path finding and image processing.

De Montfort University(Electronic Club) *Leicester , UK*

Member *Oct. 2017 - July. 2018*

- To enhance my knowledge about the inner-workings of most electronic parts/components also allowing me to learn to solder and create micro-circuits that power led's/led strips furthermore this enabled me to further my experiences in programming hardware using C programming in conjunction with the uses of Arduino to power and control micro-embedded systems application thus through this I was able to further my knowledge and experiences in building embedded system and understanding the concept and application of low level programming to power micro-systems.

De Montfort University (Formula Student) *Leicester , UK*

Team member *Oct 2017 - July 2019*

- My responsibilities were to help build and develop the Race car by removing parts from the previous chassis and altering/modifying the parts to then re-attach them to the new chassis. Moreover, some of the parts required development using Creo parametric however, this entails me having to measure and planning to recreate an existing part using Creo and making the part fit into very small space as the new chassis has different specification including a different design plan through this was able to further my knowledge and experiences in mechanical engineering.

References

References

- References upon request.