Qiwen Deng

36 Chalmers’ Street, Edinburgh

[563252952@qq.com](mailto:563252952@qq.com)

+44 07538717465

Education

**2018-2022 University of Edinburgh Artificial Intelligence with Computer science**

**Courses：**Cognitive Science、Computation Logic, Reasoning and Agent，Functional Programming，Probability，Object Oriented programming，Algorithm and Data Structure，Software Engineering，Computer Architecture，Learning，Vision and Robotics，Data and Analysis

**2016-2018 Brockenhurst College Grade：A\*A\*AB**

**A Levels：**Math、Further Math、Computer Science、Physics

**2016 IELTS Score:6.5**

Projects

**Learning: Classifications 03/2020**

Apply the Machine Learning knowledges on Matlab and python（PCA, SVM）train the high dimensional data, and use neuron network（ANN, CNN）to classify different types of frogs and other animals, amend the parameters of the model to achieve the optimal. Master in agglomerative hierarchical clustering, use the data from BNC, applied 3 [linkage](https://docs.scipy.org/doc/scipy-0.18.1/reference/generated/scipy.cluster.hierarchy.linkage.html#scipy.cluster.hierarchy.linkage) function to do the clustering。

**Vision and Robotics: Simulate Robot Arms 11/2020**

Made a 3d robot arm by using ROS, OpenCV and Gazebo in the ubantu environment。In this simulation, we capture 2 image of the robot arm from 2 cameras to estimate the joint angles and the target object location，using open-loop control, we move the end-effector to the desired position. I got nearly full mark for this（49/50）.

**Personal Project: Face Recognize APP** **04/2019**

Eigenface and Fisher is used，just for helping my professor who has got a prosopagnosia。App is running on Android，it can take photos and store it，then recognize the human face one face at a time. Under the testing environment, we can have 50 faces in the database with 90% accuracy of recognize the faces.

**Computer architecture: Multi-cycle CPU** **10/2019**

Use MIPS to write some multi-cycle CPU program. And Used C to simulate a 5-stage multi-cycle MIPS processor with a direct-mapped cache. Awarded nearly full mark for this one （99/100）。

**Software Engineering: autonomous drone 09/2020**

Use UML to design static Model and implement with java, control the Drone (direction, steps, avoid no-fly-zone) collect the data from the sensors, and produced a Software structure introduction。Use GeoJson, heatmap to visualize the air-quality data, and did several unit tests to ensure the correctness of the codes.

**Algorithms：Board game and TSP 03/2020**

Using Haskell developed a board game, and serval algorithms (BFS, DFS, greedy, minmax) applied to support the AI to play games with human. Use Python with some heuristic algorithms（two opt, A star, annealing）to solve the TSP problem, amending the parameters (iteration times, study speed, etc.) to produce the optimal model.

Work Experience

**Teaching support University of Edinburgh 2020.01- Now**

Hold tutorial sessions, and mark the exams for 1st, 2nd  and 3rd year students

**AI engineer Huawei Technology C.O. Ltd. 2020.04 – 2020.08**

Participated in two important projects. Optic Fiber Sensing: As an AI algorithm engineer, mainly responsible for optimize the model and data pre-processing. Project 2215: weak network user identification, fully responsible for video frame labelling. Using computer vision technique, implement the target detection algorithm to tag the video frames to detect whether any second of this video is now jamming, achieved true positive rate over 90%.

Other

Competition：BPhO Bronze, BMO Merit, 9th in the Team math Challenge(south division).（2018.01 for all of 3）

Leisure：Duke of Edinburgh Award- silver，debate, badminton, cooking，Karting，gym，Soviet jokes