Qiwen Deng

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Education

**2018-2022 University of Edinburgh Artificial Intelligence with Computer science GPA 4.0**

**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

**2020.01- Now University of Edinburgh tutor**

Hold tutorial sessions, and mark the exams for 1st and 2nd year student

**2019.06 SHENGY TECONOLOGY CO. LTDIT Intern**

Use HTML, CSS, java and SQL developed the online application form in HR system.

**2020.06-2020.09 WUHAN Zhongtaintuoxing computer system engineering CO.LTD 后端开发**

Get the technician certificate from Aishu，studied back-end server architecture and data transmission protocols (Outh2.0, SAMBA)，Master practical skills in python.

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