Mr. Ziang Deng

Homepage: http://ziondeng.com
Tel.: 86-13812639957, E-mail: ziondeng@berkeley.edu

Education Background

University of California, Berkeley ***08/2020-05/2021***

Major: Robotics and Autonomous Systems GPA: 3.92/4.0

Degree: **Master of Engineering**

Core Courses*: Advanced Control Systems, Experimental Advanced Control Design, Hybrid Systems and Intelligent Control*

Nanjing Agricultural University ***09/2016-06/2020***

Major: Mechanical Design Manufacturing and Automation, GPA: 3.91/4.5, Rank: 1/58

Degree: **Bachelor of Engineering**

Core Courses*: Advanced Mathematics, Digital Modeling, Mechanical Design, Mechatronics Technology.*

Honors: National Scholarship (Top 1 out of 60 students) *11/2017*

Publication & Patent

- Maohua Xiao, **Ziang Deng,** You Ma, et al. Ratings of Rice Leaf Blast Disease Based on Image Processing and Stepwise Regression[J]. Applied Engineering in Agriculture, 2019, 35(6):1037-1043.
- Maohua Xiao, You Ma, Zhixiang Feng, **Ziang Deng,** Shishuang Hou, Lei Shu, ZhiXiong Lu. Rice Blast Recognition Based on Principal Component Analysis and Neural Network, *Computers and Electronics in Agriculture* (ISSN: 0168-1699), August 2018, p. 482-490.
- Jingjing Kang,You Ma, Maohua Xiao, Zhixiang Feng, **Ziang Deng**, Sanqin Zhao. Rice Blast Recognition Based on Image Processing and BP Neural Network, *International Agricultural Engineering Journal* (ISSN: 0858-2114), March 2018, p. 250-256.
- Maohua Xiao, You Ma, **Ziang Deng**, Zhixiang Feng, Jingjing Kang, Shishuang Hou. A Method for Rice Blast Identification Based on Aerial Field Image, August 2021. No.: 2021071900616710.

Researches

Capstone Project: Robotics at home ***09/2020- 05/2021***

Position: Software developing leader

- In charge of programming and build the system framework
- Integrate YOLO, A*, DQN and control theories for robot path-finding
- Build simulation environment and finish tests

Course Project of Advanced Control Design -*Autonomous Drone Racing* **10*/2020-11/2020***

Position: Team Member

- Build a model for drone dynamics with cost and constraints
- Propose a Learning Model Predictive Control (LMPC) for autonomous drone racing.
- Simulate the racing process using Python.

Graduation Project and Thesis - IoT System Design for Intelligent Electric Micro-tillage Machine for Facility Horticulture ***11/2019-05/2020***

- Self-designed an IoT system for electric micro tilter combining Raspberry Pi,SenseHat, PyTorch
- Extraordinary personal thesis and extraordinary team thesis
- Designed an app for user and optimized the network accuracy to 90%.

Development of Rice Disease Detection System Based on Android Image Recognition

Position: Team leader ***03/2018-05/2019***

- Accomplished the image processing of rice blast through MATLAB
- Identified the blast disease by using various algorithms, including BP, SVM-BP, deep convolutional neural network, etc.
- Utilized stepwise regression method to achieve the level of rice blast classification
- Successfully finished image processing, and optimized the system interface through Android studio

Shedyou Technology: Build a Greenhouse Think Tank Service System ***03/2018-05/2019***

Position: Key team member

- Developed an APP using Android studio, to enable the SQL database connection, data acquisition, analysis, drawing and other functions on the Android terminal
- Employed deep learning methods to analyze environment data to provide farmers with pest and disease warning and water and fertilizer ratio management

Working Experience

Tesla Core Automation Engineering Team ***06/2021-present***

Position: Associate Control Engineer

- Develop Tesla Standard Control Template and SCADA for autonomous manufacturing.
- Use Ignition to make programs for better human-machine interactions.
- Write PLC programs for DU EOL to control the working parts

Nanjing SeetaTech Technology Co., Ltd ***07/2019-08/2019***

Position: Algorithmic intern of New Retail Department

- Mainly responsible for designing an APP for food plate items detection and identification
- Adopted development board with NPU(neural network process units) to realize the functions
- Self-learned and used deep learning models including YOLO and ReID, successfully reduced the recognition time of single image from 1.8 seconds to 0.5 seconds

Awards

Provincial Extraordinary Team Graduation Thesis *06/2020*

Kyoto International Entrepreneurship Contest for University Students 2019, ***First Prize*** *05/2019*

2018 Jiangsu Association of Agricultural Science Societies 2nd Chuangxing Cup Innovation and Entrepreneurship Competition, ***First Prize of Innovation Group*** *10/2018*

" Dingxiang-Chuangka Cup" Energy Conservation and Environmental Protection Creative Competition held by Jiangsu Energy Research Association, ***First Prize*** *09/2018*

2018 College Students' Entrepreneurship Competition in Jiangsu Province, ***Silver Award*** *07/2018*

The 8th East China College Students CAD Application Skills Competition, ***Third Prize of Mechanical Engineering Drawing*** *06/2018*

2018 National English Competition for College Students, ***Third Prize for Brand C*** *05/2018*

2017 " Dongfanghong Cup" The 3rd National Intelligent Agricultural Equipment Innovation Competition for College Students, ***National Second Prize*** *12/2017*

The 14th Higher Mathematics Competition for Colleges and Universities in Jiangsu Province, ***Second Prize of Undergraduate Level II Group*** *06/2017*

Extracurricular Activities

MIT "Artificial Intelligence and Robotics" International Certificate Program *01/2019-02/2019*

-Learned about artificial intelligence and robotics, and finished the class presentation

Student Union , *Minister of Career Development Department* *09/2017-06/2018*

-Organized a number of activities including Business Incubator Visit, Mock Interviews and etc.

-Obtained the title of "Outstanding Minister of the Student Union"

Skills

Computer skills: Proficient in Python,MATLAB, AutoCAD, CREO; familiar with Java, Android.

Hobbies: Basketball, Table tennis, Go of 4 dan grading, Erhu of 10th level, Calligraphy of 4th level.