KYLE HAN CHEUNG

Department of Biological and Agricultural Engineering
University of California, Davis
kyhcheung@ucdavis.edu
+1 (650) 866-5153

EDUCATION

Expected June 2020	M.S. in Biological Systems Engineering *University of California, Davis*
June 2018	B.S. in Biological Systems Engineering *University of California, Davis* GPA: 3.44/4 Biotechnology emphasis

RESEARCH EMPLOYMENT

Sep 2018 – Present	**Graduate Student Researcher** PI: Alireza Pourreza, Cooperative Extension Specialist *Department of Biological and Agricultural Engineering* *University of California, Davis*

- Develop pre-processing and machine learning analysis pipeline for drought injury classification in turfgrass with multispectral images
- Create an interactive, automated Python-based toolset to segment trees and derive statistics from aerial photogrammetry mosaics (using rasterio, OpenCV)
- Plan and conduct small, unmanned aerial vehicle flights for LiDAR data collection of orchards
- Write GIS tutorials for undergraduate students covering concepts in raster calculations and shapefile overlays

July 2018 – Present	**Staff Research Associate** PI: Jeremy James, Director *Sierra Foothill Research and Extension Center* *University of California, Dept. of Agriculture and Natural Resources*

- Design electric drive train and carriage system for an unattended rainout shelter positioned on a slope
- Automate a 16 rainout shelter array using primary/secondary programmable logic controller (PLC) network
- Consult in the design of a wireless sensor network to collect field instrument data

Dec 2015 – Mar 2017	**Undergraduate Research Fellow** PI: Jonathan Woolley, Project Scientist *Western Cooling Efficiency Center* *University of California, Davis*

- Studied intuitive, repeatable software modeling techniques for hybrid air conditioning systems
- Composed complex, multi-mode performance maps for desiccant-based dehumidification and indirect evaporative cooling air handling units

TEACHING EXPERIENCE

Fall 2017
Fall 2018 – Spring 2019

Teaching Assistant
ENG 3 – Introduction to Engineering Design

- Provide critical feedback to students' presentations for mastery and greater confidence in engineering communications during weekly studio sections
- Teach logical and methodical strategies for problem solving to lower-division undergraduate students
- Teach high-level programming concepts in physical computing using sensors interfaced with Arduino and Raspberry Pi
- Assist students with defining project scope to meet client constraints and timeline

WORK EXPERIENCE

Apr 2017 – June 2018

Associate Automation Engineer
Banks Integration Group
Vacaville, CA

- Wrote Good Manufacturing Practice (GMP)-compliant specifications and test documents for purified water system
- Troubleshooted and identified solutions during emergency support calls and startup at client sites
- Translated a PLC system based on MicroLogix platform to ControlLogix platform with GEMS Process Library Objects
- Interfaced RSLogix5000 tags with FactoryTalk View Alarms & Events Server
- Produced company IT maintenance tools, administer VMWare VCSA and Windows Server

PRESENTATIONS

Oral Presentation

"Identification of Drought Stress in Turfgrass Using Multispectral and Hyperspectral Remote Sensing," ASABE International Meeting, Boston, MA, July 2019

"Modeling the Munters DryCool HCUc," National Renewable Energy Laboratory, Golden, CO, September 2016

Poster Presentation

"Identification of Drought Stress in Turfgrass Using Hyperspectral and Multispectral Remote Sensing," ASABE California/Nevada Sectional Meeting, Tulare, CA, February 2019

AWARDS AND HONORS

2019	2nd Place, Graduate Student Poster Competition ASABE California/Nevada Section
2019	Jastro-Shields Travel Award *UC Davis, Department of Biological and Agricultural Engineering*
2018	Outstanding Senior Award in Biological Systems Engineering *UC Davis, Undergraduate Education*
2018	Department Citation *UC Davis, Department of Biological and Agricultural Engineering*
2016 – 2017	Dean's Honors List *UC Davis, College of Engineering*

ACADEMIC SERVICE

Winter 2019 – Present	Graduate Student Mentor, ASABE Robotics Student Competition
2016-2017	Vice President, Society of Biological Engineers at UC Davis
Spring 2017, Fall 2017	Sustained Dialogue Moderator, UC Davis LEADR

LICENSES AND CERTIFICATIONS

FCC Amateur Radio License, Extra Class
FAA Remote Pilot Certificate

REFERENCES

Reference contact list promptly available upon request.