



WORK EXPERIENCE

Research Internship at Bailey Plant Simulation Lab

March 2018 - July 2019

- Developing UI for crop simulation and data projection application *Cronus*
- Modifying LiDAR point cloud scan data of crop fields into 3D meshes for immersive observation with the HTC Vive Head Mounted Display in Unreal Engine's VR game environment

CCIA Crop Inspector

May 2018 – August 2018

- Sunflower crop inspecting involving record keeping and working with agronomists to prevent weed, pest, and maturity problems

UC Davis IET – Student Staff

October 2015 – December 2015

- Scripted, recorded, and published customer support tutorial videos intended for the UC Davis internet user base

Accenture – Contractor

July 2014 – Sept. 2014

- Worked at a “diamond client” project and successfully completed migration of the project documentation from DocuWiki to a new Mediawiki site. Worked with various teams to consolidate their individual documentation, trained project staff to use the new wiki and performed technical handoff.

EDUCATION

University of California, Davis

Jun. 2019

Bachelor of Science, Plant Science

Emphasis: Genetics and Plant Breeding

Relevant Coursework:

Single & Multivariable Calculus, Linear Algebra, Differential Equations, MATLAB Programming, Circuits, Applied Statistics for Bio Sci, Genes & Gene Expression, Plant Genetics, Forage Crop Production, Plant Propagation, Plant Breeding, Organic Crop Production, Macroevolution, Integrated Pest Management, Plant and Crop System Modeling, Greenhouse and Nursery Crop Production

SKILLS

Lab Skills:

Biology and chemistry lab procedures
Micropropagation
Agrobacterium culture
Leafdisk inoculation
Gel electrophoresis of RT-PCR products
Northern blot
Western blot
Quantitative GUS analysis
PCR and DNA isolation of transformed tissue
Isolation and analysis of proteins
Bioinformatics and gene database investigation
Plant growth tracking
Fertigation system design
Industrial scale vertical hydroponics assembly

Interests:

General Systems Theory, 3D Animation, VR, Game Development, Filmmaking, Painting, Independent Music Production, and Flameworking

Programming skills

Python & C#
MATLAB
HTML & CSS
PHP
UNIX command line

Software skills:

SolidWorks
Excel
WordPress
BLAST
R Studio
Git source control
Unreal Engine
Adobe Creative Cloud
Blender
Unity
Ableton Live 9
ARC GIS
APSIM

PROJECT EXPERIENCE

Selective Breeding with Brassica Rapa

Jan. 2018 – Mar. 2018

- A breeding project carried out for increasing leaf trichome number in a population of Brassica Rapa
- Significant increase of 1.4 standard deviations of the mean reported in the progeny generation

Foundations of Biosystems Engineering Algal Bioreactor Project

Jan. 2017 – Mar. 2017

- Original design and construction conceived for the purpose of cultivating algae and potentially extracting ethanol-based biofuels
- Project limitations included carbon footprint, energy efficiency, and portability

MATLAB Audio Sampler

Mar. 2016

- Music editing and creation application written in the MATLAB environment
- Functionality included playback, interactive waveform visualization, low-pass filter, analog synthesizers, BPM and tempo adjustment, and audio filters such as high pass and vocal removal