

# MARK BROWN

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- HTML5 / CSS3
  - JAVASCRIPT / JQUERY / ANGULAR2
  - DATABASE MANAGEMENT
  - VERSION CONTROL (GIT)
  - PHP
  - PYTHON
  - JAVA
  - WINEMAKING
  - AGRICULTURAL TECHNOLOGY
  - PROJECT MANAGEMENT
  - PROCESS CONTROLS
  - ROBOTICS
  - EMBEDDED SYSTEMS DESIGN
  - MAIL SERVERS
  - MIG WELDING
  - ADOBE CREATIVE SUITE
  - UNMANNED AERIAL VEHICLES
  - CAD DESIGN / 3D PRINTING
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## EXPERIENCE

### FOUNDER AND DEVELOPER

Viti Analytics, Napa, CA, January 2015 - Present

Developed database-driven AngularJS web application with D3.js per-vine charting on leaflet map. PHP backend with JWT authentication/routing mechanism. Developed algorithms for analysis with the heavy lifting done in python with numpy and pandas. Server setup and administration, migration to AWS. Designed and built NDVI Hexacopter drone and autonomous robot that determines leaf area by gap-light photometry. Server administration, migration to AWS.

### WEB DEVELOPER

Fine Disregard Wine Co, Napa, CA, August 2015 - Present

Design of single-page database-driven Javascript Front-End and PHP Backend for winery e-commerce site.

Server setup and administration.

Payment processing with PCI Compliance.

### VINEYARD TECH

Fruition Sciences, St. Helena, CA, March 2013 - January 2014

Installed and maintained scientific sensors and data loggers in over 60 different client vineyards, performed pre-dawn leaf water potential readings and maturation sampling.

Acted as remote support for network troubleshooting through VPN to customer gateways.

Created source files for javascript display of vineyard blocks on javascript map. Designed, programmed and built automatic test jig for equipment integrity and conformance checks.

(Ohm's law calculation in C++ on embedded chip with shift registers, sqlite database and wi-fi support) Performed end-of season equipment analysis, repair, and inventory.

### PRODUCTION ASSISTANT

Atelier Melka, St. Helena, CA, July 2014 - January 2015

Processed vineyard sampling and lab analysis in-house, scouted vineyards and logged maturation profiles. Monthly barrel inventory and wine movement reconciliation. Supervised

picks and processing activities at over 30 different vineyards and five custom-crush facilities, scheduled staff and maintained inventory of dry goods. Created digital assets including work order PDF fillable form with parse and database upload functions, created client harvest reports, and introduced inventory version control.

### PRODUCTION ASSISTANT

Mending Wall, Calistoga, CA, August 2016 - January 2017

Processed 400 tons for winery and custom crush clients including fermentation management, inoculations/additions, racking/blending, topping and bottling. Facilities maintenance including wiring, must pump repair, glycol line maintenance, elevator belt replacement, and air pump repair.

### **VINEYARD SCOUT**

Regusci Vineyard Management, Napa, CA, March 2015 - September 2015  
Developed and implemented vine water status program for client winery, scouted vineyards, including petiole sampling, cluster counts, and leaf water potential measurements.

### **PRODUCTION ASSISTANT**

Staglin Family Vineyards, Rutherford, CA, July 2012 - February 2013  
Performed fruit maturation sampling and analysis for Estate vineyard and Bella Oaks. Processed fruit and performed pumpovers, punchdowns, barrel turns and battonage. Performed lab analysis including color tri-stimulus by UV/VIS spectrophotometer, and SO<sub>2</sub> by oxidation/aeration. Calibrated OenoFoss for comparative analysis of Brix, TA and pH. Installed glycol lines and thermostats for new tanks. Operated bottling line.

### **HARVEST INTERN**

Ovid Vineyards, St. Helena, CA, August 2011 - December 2011  
Performed fruit maturation sampling and analysis for Estate vineyard. Processed fruit, managed crushpad operations, performed pumpovers, punchdowns, delestage, barrel turns, pigage, and battonage. Set up acid trials, copigmentation assays by UV/VIS spectrophotometer. VA analysis by cash still and titration. Repaired crush equipment, racked barrels, and hand bottled.

### **HARVEST INTERN**

Ladera Vineyards, Angwin, CA, August 2009 - December 2009  
Performed fruit maturation sampling and analysis for Estate vineyard. Processed fruit, performed pumpovers, punchdowns, battonage, and racking. Tracked fermentations, performed basic wet chemistry lab analysis.

### **INTERN / LAB ASSISTANT**

Tassel Ridge Winery, Leighton, IA, January 2009 - August 2009  
Processed bulk juice transfers, operated cross-flow filter, bottled wine and maintained weekly inventory. Performed lab analysis including use of autotitrator and eubilloremeter. Planted new vineyard blocks.

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## EDUCATION

**BACHELOR OF ARTS IN POLITICAL SCIENCE**  
University of Iowa, 2009

**COURSEWORK IN BIOCHEMISTRY**  
University of California Berkeley, 2012

**COURSEWORK IN VITICULTURE AND SENSORY ANALYSIS**  
Napa Valley College 2010-2011

**COURSEWORK IN ANALYSIS OF VARIANCE**  
University of California Davis, 2012

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## PORTFOLIO

<https://www.viti.io>  
<https://www.finedisregardwine.com>  
<http://www.omegabrewing.com>  
<http://se.quenc.es>  
<http://www.markbrown.space>