Berkeley, CA

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559.281.0371

#### **EXPERIENCE**

## Zymergen, Inc. | Emeryville, CA

Zymergen applies data science and laboratory automation to improve microbes used in industrial fermentation PRODUCT MANAGER | JUL 2017 - PRESENT

ASSOCIATE PRODUCT MANAGER | JUL 2016 - JUN 2017

- > Product owner for internal Manufacturing Execution System (MES) that coordinates high throughput strain construction and screening in automated labs.
- > From project ideation, worked across functions (e.g., Manufacturing, Business Development) to define requirements to support scalable manufacturing processes with increasing product mix and throughput.
- > Worked with software and hardware engineering teams to develop specifications from user stories, and coordinated sprints with engineering teams to implement.
- > Facilitated adoption by defining phased implementation plan with manufacturing management.

RESEARCH ASSOCIATE III | JAN 2016 - JUL 2016 RESEARCH ASSOCIATE II | FEB 2015 - JAN 2016

- > Wrote Python client library for REST API to internal Laboratory Information Management System (LIMS).
- > Defined and automated data pipeline; managed quality control processes for high-throughput DNA and strain construction workflows.
- > Worked with Automation team to develop genotyping workflow employing 384-well plates and liquid handling robotics, reducing operation time (~50%) and consumable cost (~67%).

## E&J Gallo Winery | Modesto, CA

Gallo is the largest winery in the world, holding more than 25% of the American wine market

ADVANCED ENGINEER | OCT 2014 - JAN 2015

ASSOCIATE ENGINEER | MAY 2013 - SEPT 2014

- > Managed scale-up of reactive distillation process to recover value from waste; valued at \$150-300 MM.
- > Worked with Operations to troubleshoot scale-up of proprietary yeast strains, ensuring success of fermentations valued at \$0.5 MM.
- > Built nonlinear regression model to understand dynamics of stuck fermentations at 0.5 MM gal scale.
- > Applied thermal enzyme deactivation kinetic model to improve operation of flash pasteurization systems.

### **EDUCATION**

## Cornell University | Ithaca, NY

MEng Biological Engineering, May 2013 (GPA: 4.2) BS Biological Engineering, January 2013 (cum laude)

## PROFESSIONAL DEVELOPMENT

Coursework in Decision Analysis (Stanford University Dept. of Management Science and Engineering) Coursework in Data Science (Specialization by Johns Hopkins University at coursera.org)

#### **SKILLS & KNOWLEDGE**

## **Technical Skills**

Modeling, Simulation, and Optimization Relational Databases, e.g., MySQL Statistical Computing, e.g., MATLAB, Python, R, VBA

## **Product and Project Management**

Product Development
Requirements Definition
Resource Capacity Planning
User Engagement

## **PUBLICATION**

Webster D. P. et al. (2014). An arsenic-specific biosensor with genetically engineered *Shewanella oneidensis* in a bioelectrochemical system. Biosens. Bioelectron. Vol. 62.

# **INTERESTS**

I enjoy songwriting, philosophy of science, martial arts, baseball statistics, and learning from the passions of others.