

# DANIEL MELVIN

415.717.3371 dfmelvin2@gmail.com dfmelvin.com

## PROJECTS

### Specific Gravity measurement

Sanitary stainless steel welding of assembly to measure specific gravity of beer while fermenting.

### NACA Airfoil for Water Table

6061 Naca 64-206 profile machined for supersonic flow water table analogy.

## COMMERCIAL WORK

### Sailboat Bow Roller

3D contoured 316 stainless steel bow plate with integrated mast mount and bow roller.

### Engine Freeze Plugs for HUFFAKER ENGINEERING

CNC machined tight tolerance freeze plugs with holding clip.

## PROTOTYPES

### Fox Float x2 Adjuster Tool

First iteration for quick on-trail adjustment tool.

### Direct Mount Bike Stem

Traditional single bolt bar clamp, weights 62.6g per set without bolts.

### Grain Mill

Grinder for making flours, uses opposite-direction tapered helical grinding grooves cut out of matching parabolic grinding wheels.

### Presfit 30 Bottom Bracket

Three currently in use, made from 6061 AL, using 2 driveside bearings.

### SPD Clipless Pedal Adapter

Machined platform pedal that clips into a Shimano SPD.

## PROFESSIONAL PROFILE

### Manufacturing Engineer, Veer Cycle 2018-Present

Design and manufacturing of tooling and fixturing for production operations. CAM and machine operator for Prototype and pre-production sprockets.

### Founder and Only Employee, Material Engineering 2013-Present

Design and small scale production of steel, stainless steel and aluminum components on a Fadal 3016 CNC machine, as well as precision and onsite welding using a variety of TIG and custom MIG welding machines.

### Welding Fabricator, Touchstone Climbing Inc. 2011-2012

Primary designer and welder for the build out of approximately 200 LF of commercial railings, including three stairs for an indoor rock climbing location in San Jose. Primary designer for a 40' tall movable crack apparatus for a similar facility in Fresno, and junior fabricator of the steel frame for 10,000 SF of climbing walls there.

## SKILLS

### Welding, Machining and Fabrication

- TIG Welding
- MIG Welding
- Gas Welding
- General Fabrication
- Manual Machining

### CNC Machining:

- Fadal 3016HT
- NC Coding

### CAD Software

- Autodesk Inventor
- Autodesk Fusion 360
- Solidworks

### Cam Software

- HSM
- Fusion 360
- Mastercam

## EDUCATION

### University of California Davis, School of Engineering 2015-2018

Mechanical Engineering (BS) with a Minor in Material Science

UC GPA: 3.26

### Relevant Coursework and Team:

- Stability of Flexible Dynamic Systems
- Mechanical Behavior of Materials
- Engineering Analysis using Matlab
- Auto Control of Engineering Systems

## ATHLETIC PURSUITS

Riding and racing mountain bikes is my primary athletic pursuit, but I also ski, rock climb, ice climb, and mountaineer.

- Northstar Downhill series 2nd overall 2016, Canadian Open 2014-2015
- Liberty Ridge, Mt. Rainier
- Widow's Tears, Yosemite