(310)-882-0025
mbogumil@ucla.edu

Michael Bogumil

Education

University of California, Los Angeles *Anticipated Graduation: June 2019*

- B.S. Bioengineering
- GPA: 3.4
- Units: 54

Santa Monica College *Attended: 2012 – 2016*

- Transferred
- GPA: 3.84
- Units: 131

Projects/Experience

- **Di Carlo Laboratory** *June 2017 - present*
  I worked on projects to create devices that sort microfluidic droplets based on their differing viscoelastic properties. I developed software to process and analyze video from high-speed microscopes, as well as performed experiments using these sorting devices.

- **Project Angel Food** *September 2008 - present*
  Project Angel Food is a non-profit that provides free meals to people afflicted with AIDS or cancer. I developed software for the processing and automated coding of their yearly client surveys.

- **400MHz NMR Lab at Santa Monica College** *February 2015 – June 2016*
  I worked in Santa Monica College's NMR lab running spectra for their organic chemistry lab. I ran NMR spectra using JEOL 400Mhz NMR spectrometer. In addition to preparing samples for the spectrometer, I analyzed 1 and 2-dimensional NMR spectra.

- **40 MHz NMR Project** *2015 - 2016*
  I independently designed and built a 40Mhz NMR. I started this project as an exercise to learn more about nuclear spin physics and the instrumentation needed to observe T_1 and T_2 relaxation processes.

- **Smart Barbell** *2016*
  I worked on a team as lead designer to produce a smart barbell that aids patients in physical therapy. The barbell records patients exercising motion when under the supervision of a physical therapist. It quantitatively compares this record to the motion the patients make when exercising by themselves and uses this to promote more efficient exercise.

Skills

- Programming Languages: C/C++, MATLAB, Python, Verilog
- Embedded Systems: 8/32 Bit Microcontrollers, Beaglebone, Raspberry Pi, Intel's Edison, Xilinx FPGA/CPLD
- AutoCAD, AutoDesk's Inventor and KiCAD for PCB design
- Cell passaging in a BSL2 lab setting
- Prototyping using: Vertical Mill, Lathe and 3D printing
- Image Analysis using OpenCV and MATLAB's Image Processing Toolbox
- Artificial Intelligence using Support Vector Machines and Artificial Neural Networks