

# Brandon Gonzalez

m(818) 835-7661

Brandgonz94@gmail.com

<https://brandongonzalez01.github.io/>

San Diego CA, 92122

---

## EDUCATION

University of California, San Diego. Class of 2020 **Major:** Biochemistry **Minor:** Computer Science

### Relevant classes:

Intro to Bioinformatics, Advanced Data Structures, Software Engineering, Intro to Java I/II, Intro Algorithms and Data Structures, Organic Chemistry, Molecular Biology, Chemistry of Biological Interactions Lab, Cell Biology, Structural Biochemistry.

---

## SKILLS

Python, web app development using Django, Flask, Bash scripting, R, C/C++, Java, HTML5/CSS. Machine Learning using Keras, Computational Chemistry using RDKit. Wet lab skills: qPCR/PCR, DNA extractions, blotting, cloning, data analysis, assay development, HPLC/UPLC, GC/MS.

---

## EXPERIENCE

### Center for Epigenomics@UCSD, Bioinformatics intern

June 2019 – current

- Using Django, AJAX and JavaScript I added functionality to in-house LIMS web app by integrating a new data analysis pipeline to existing workflow to handle single cell ATAC sequencing job submission to HPC via bash script. I also lead development of Django app in the existing project for handling single cell samples.

### Lo Lab, Student Assistant and IA

June 2019 - current

- Research different bioinformatic software and data pipelines for 16s metagenomic analysis to help development of workflow and curricula for undergraduate biology lab course. Undergraduate Instructional Assistant for such lab for the fall quarter of 2019.

### Catalent, Lab Assistant

Drug Delivery and Formulation, April 2018 – November 2018

- Assist in drug formulation experiments such as purity and potency analysis with HPLC/UPLC under the supervision of a fulltime pharmaceutical chemist in a regulated environment.

### The Scripps Research Institute, Undergraduate Research Assistant

Juan Carlos De la Torre, Virology Lab, October 2016 – June 2017 | September 2017 – March 2018

- Experienced with general lab and biochemical techniques such as western blots, gel electrophoresis, microscopy to assist in lab's investigation of potential live attenuated vaccines against LCMV.

### EntroGen Inc, R&D Intern

October 2015 - September 2016 | June 2017 - September 2017

- Aid in R&D and validation of qPCR diagnostic assays targeting DNA and cell free DNA.
- 

## PROJECTS for more visit my personal website: <https://brandongonzalez01.github.io/>

**Machine Learning Chemical Solubilities:** At Catalent, as my summer intern project I wrote a machine learning web app using python and flask backend with JavaScript front end. Input a SMILES to generate a fingerprint as an input to a Keras neural network for regression outputting a predicted solubility.

**Differential Expression Analysis** <https://tinyurl.com/bganalysis>: Analyses of GEO entry GSE37704, analysis of the effects of knocking down HOX1a gene. Used R and Bioconductor packages such DESeq2 for analysis, annotating and visualizing which biological pathways are affected.

---

## REFERENCES

- Meghan Walsh, Ph.D.: EntroGen Regulatory Affairs Manager [Meghan.walsh@entrogen.com](mailto:Meghan.walsh@entrogen.com)
- Kirk Reynolds, Ph.D.: Catalent Pharmaceutical Chemist, Supervisor [Kirk.reynolds@catalent.com](mailto:Kirk.reynolds@catalent.com)
- Stanely Lo, Ph.D.: UCSD professor, supervisor of IA's [smlo@ucsd.edu](mailto:smlo@ucsd.edu)