

Daniel Dirksen

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Education

Biola University, La Mirada, CA

B.S. in Engineering Physics with a Computer Science Emphasis

Finished: Fall 2021

- 3+2 Program: 3 years at Biola University, 2 years at USC.
- Planned transfer to USC: Fall, 2022.
- GPA: 3.836/4.000

Experience

SSTH Summer Engineering Internship | Biola University

Engineering Intern

May 2021 - July 2021

- In an 8-week solo project, created an automated cannulation device, currently being used by a heart disease research team.
- Responsible for every aspect of the apparatus, involving an Arduino-controlled fluid routing system with an interactive graphical user interface, directed by an interrupt-driven state machine.

Songs for Saplings, Inc

Full-Stack Web Developer

June 2020 - July 2021

- Built and deployed an iframe-embeddable, cloud-hosted web app from scratch for *Songs for Saplings*, a non-profit music organization for kids.
- Matched extensive design specifications using Node.js, Express, and React.
- Implemented opt-in cookies, Mixpanel usage-logging, automated digital mailing, and more.

Nanomedicine & Genomics Summer Research Internship | Biola University

Frontend Web Developer

July 2021 - August 2021

- Created a more usable gene search experience for *ORFanID*, a web-based service that allows researchers and students to easily search for orphan genes.
- Created functionality for screening, validating, and prettifying FASTA sequence searches.
- Saved time for both the user and the backend by pre-screening bloated, invalid, or self-contradictory searches.

Solutional, Inc.

Contractor

August 2015 - January 2021

- *Bee Thinking, LLC* | Used Solidworks to create accurate blueprints for artificial beehive prototypes to be used in production.
- *Curadite, Inc.* | Created the early mockup sketches for a medical device, balancing aesthetics with feasibility.
- *DeepSurface Security, Inc.* | Created a tool to automate market data-collection using Node.js; created motion-graphics and edited videos for the marketing team.

Skills

Hard

- Arduino programming with state-machines and interrupts.
- 9 years of recreational, academic, and professional programming experience (Matlab, Python, C++, Java, Rust, Javascript, HTML, CSS).
- Professional front- and back-end web development experience (self-taught).
- Experience with frameworks and libraries such as OpenCV, Tensorflow, NodeJS, Express, React, jQuery, threeJS, and A-Frame.
- Professional experience with 3D- and 2D-CAD, 3D-printing, and lazer-cutting using Solidworks, OnShape, and Blender.

Soft

- Adaptable and capable in fast-paced, high-stress environments.
- Comfortable with written communication, presentation, and public speaking.
- Timely self-management of large, complex, multidisplinary projects.
- Familiar with iterative engineering techniques.