Daniel Dirksen

Lake Oswego, Oregon

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Education

Biola University, La Mirada, CA

Engineering Physics, Comp. Sci.   2019 - 2024

- 3+2 Program: 3 years at Biola University, 2 years at USC.
- GPA: 3.836; Transfer to USC planned, Fall, 2022.

Experience

Biola SSTH Summer Engineering Internship

Engineering Intern   May 2021 - July 2021

- In an 8-week 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.

Nanomedicine & Genomics Summer Research Internship

Frontend Web Developer Intern   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, invaid, or self-contradictory searches.

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 frontend and backend specifications using Node and React.
- Implemented opt-in cookies, Mixpanel usage-logging, automated mailing, and more.

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

Technical

- Nine continuous years of programming experience
- Languages: Python, C++, Matlab, Java, Rust, Javascript, HTML, CSS.
- Frameorks: OpenCV, Tensorflow, NodeJS, React, jQuery, threeJS, A-Frame.
- Paradigms: Object-oriented programming, entity component systems, state machines with interrupts.
- One year of professional full-stack web-development.
- Professional experience with 3D- and 2D-CAD, 3D-printing, and lazer-cutting using Solidworks, OnShape, and Blender.

Interpersonal

- Adaptable and capable in fast-paced environments.
- Comfortable with written communication, presentation, and public speaking.
- Able to self-manage large, complex, multidisplinary tasks
- Trained in iterative engineering techniques.