Benjamin Darnell

📞 (408) 797-8394 | ✉ ben@bdarnell.com | Ben1152000 | 🏠 bdarnell.com

WORK EXPERIENCE

Research Assistant
UCSB Programming Languages Lab
📅 *June 2020–Present* 📍 *Santa Barbara, CA*

- Contributed to a paper (*in progress*) using program synthesis for processor development. Designed a pipelined RISC-V core and extended a hardware description language to support holes for sketch-based program synthesis.
- Created Sootty, a VCD waveform viewer for hardware simulations. Added support for integration with PyRTL. Currently mentoring undergraduate students on this project.
- Designed and created regular language problem generation tools for teaching CS Theory. Presented research poster at RACA-CON '20.

Engineering Intern - Jobvite, Inc.
📅 *June–September 2019* 📍 *San Mateo, CA*

- Built a framework for Automation testing of Jobvite's Candidate Self-Scheduling web-interface in Java using the Selenium webdriver, and automated a suite of QA test cases.

Engineering Intern - Baobab Studios
📅 *May–September 2018* 📍 *Redwood Shores, CA*

- Performed QA testing on scenes in *Crow: the Legend*, a Unity VR experience.
- Wrote scripts to automate audio/video conversion with ffmpeg to support mobile platforms.

Lab Assistant - Los Alamos Nat'l Laboratory
📅 *June–August 2017* 📍 *Los Alamos, NM*

- Synthesized a quantum dot display for the Bradbury Science Museum and developed code to analyze image data with computer vision using Igor.

TEACHING EXPERIENCE

Undergraduate Learning Assistant
Department of Computer Science, UCSB
📅 *2020–2021* 📍 *Santa Barbara, CA*

- Tutored upper-division Data Structures and Algorithms classes across five quarters.
- Provided one-on-one support, led review sessions, graded assignments.

EDUCATION

B.S. in Computer Science   GPA: 3.97/4.0
University of California, Santa Barbara
College of Creative Studies
📅 *2018–2022 (Expected)* 📍 *Santa Barbara, CA*

Kehillah Jewish High School
📅 *2014–2018* 📍 *Palo Alto, CA*

SKILLS

Languages: Python, C/C++, Java, HTML/CSS, Javascript, React, Unix Shell.

Relevant Courses: Data Structures & Algorithms, Formal Languages, Parallel Programming, Computer Architecture, Computational Geometry, Compilers, Operating Systems, Runtime Systems.

SELECTED PROJECTS

π2c: Python-to-C Transpiler (github)

- Designed a compiler that converts Python bytecode to C in order to optimize execution.

Cartesia: Tabletop Game Simulator (github)

- An online, interactive Dungeons & Dragons game board developed during the COVID-19 pandemic to assist GM's in holding remote games.

HONORS & ACHIEVEMENTS

UC Regents Scholar   *2018—2022*
Top 1% of applicants at UCSB.

CCS Summer Undergraduate Research Fellow
📅 *Summer 2020*

- Developed CS education tools using C++ under Dr. Ben Hardekopf.

EXTRACURRICULARS

Logistics Coordinator, SB Hacks
📅 *2020—Present*

- Managed budget, venue, catering, and website for UCSB's inclusive student-run hackathon.

President, Juggling Club at UCSB
📅 *2020—Present*