Benjamin Darnell

📍 6515 El Greco Rd. Apt D, Isla Vista, CA 93117

📞 (408) 797-8394 | ✉ bdarnell@ucsb.edu | ⚙ Ben1152000 | 🔗 bdarnell.com

EDUCATION

B.S. in Computer Science *2022*
College of Creative Studies, University of California, Santa Barbara   GPA: 3.96/4.0

High School Diploma *2018*
Kehillah Jewish High School, Palo Alto, CA

RESEARCH EXPERIENCE

Research Assistant 2021—Present
UCSB ArchLab

- Currently working with Professor Jonathan Balkind on applications of PL in HDL design.
- Assisted a graduate student on a project using program synthesis to synthesize control logic for CPUs. Extended the PyRTL HDL to support ... [REFERENCE]
- Created Sootty, a VCD waveform viewer for viewing hardware simulations in a terminal. Added support for integration with PyRTL. Currently mentoring undergraduate students on this project.
- Worked with a graduate student to create a formalization for system-on-chip protocols.

Research Assistant 2020—2021
UCSB Programming Languages Lab

- Assistant to Professor Ben Hardekopf, creating tools for teaching Formal Languages.
- Extended MOSEL, a language of monadic second-order logic on strings, to describe DFA, NFA, and regex problems. Designed and created a C++ command-line tool to automate problem generation for use in upper-division Formal Languages classes. Presented a poster at RACA-CON 2020. [REFERENCE POSTER Automatic Problem Creation]

POSTERS & PAPERS

ZACH'S THING (IN PROGRESS)

AUTOMATIC PROBLEM CREATION *2020*

COSMOS POSTER (METALLICITY OF GALAXIES) *2016*

HONORS & AWARDS

UCEAP Global Scholarship *2021*

University of California Regents Scholarship *2018—2022*
Top 1% of applicants.

CCS Summer Undergraduate Research Fellowship *2020*

TEACHING EXPERIENCE

Undergraduate Learning Assistant
Department of Computer Science, University of California, Santa Barbara

2020—Present

- Tutored advanced undergraduate classes in Object-Oriented Programming, Data Structures and Algorithms over five quarters.
- Graded assignments and gave personalized feedback to students.
- Led group review sessions and provided one-on-one support.

WORK EXPERIENCE

RESEARCH ASSISTANT FIND OFFICIAL JOB TITLE
Department of Computer Science, University of California, Santa Barbara

Summer 2021

- Paid research assistant for Jonathan Balkind in UCSB ArchLab.

Software Development Intern
Jobvite, Inc., San Mateo, CA

Summer 2019

- 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.
- Learned agile development style, collaborated with other developers using git.

VR Engineering Intern
Baobab Studios, Redwood Shores, CA

Summer 2018

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

Laboratory Assistant
Los Alamos National Laboratory, NM

Summer 2017

- Worked at the Center for Integrated Nanotechnologies, synthesizing a quantum dot display for the Bradbury Science Museum and performed data analytics programming using Igor.
- Used image processing to extract data from videos of quantum dots for analysis.

PROJECTS

TALK ABOUT PROJECTS FOR CS 263, CS 292A? SECTION FOR GRADUATE PROJECTS

CS 263 Project (Python-to-C++ translation)

2020—Present

- item

CS 292A Project (Gerrymandering)

2020—Present

- item

EXTRACURRICULARS

Logistics Lead Coordinator, SB Hacks

2020—Present

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

CCS Undergraduate Mentor	*2021—Present*
Member, UCSB IEEE Chapter	*2020—Present*
President, Juggling Club at UCSB	*2020—Present*