Benjamin Darnell

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WORK EXPERIENCE

Graduate Research Assistant
School of Computing, UIUC
Sept. 2022–Present — *Urbana, IL*

- Developing techniques to train AI code generation models for low-resource programming languages, with applications in IT automation and agriculture.
- Co-authored An Empirical Comparison of Code Generation Approaches for Ansible, presented at InteNSE '24 (ACM/IEEE).

Graduate Teaching Assistant
School of Computing, UIUC
Sept. 2023–Jan. 2024 — *Urbana, IL*

- CS 421: Developed course material, graded papers, and tutored students in advanced Compilers course.

Undergraduate Research Assistant
UCSB Programming Languages Lab
June 2020—March 2022 — *Santa Barbara, CA*

- Created Sootty, an open-source data visualization tool for hardware simulations.
- Co-authored a paper using program synthesis for CPU development. Designed a pipelined RISC-V core and extended a hardware description language to support holes for sketch-based program synthesis.
- Developed automatic practice-problem generation tools for CS education tools. Presented research poster at RACA-CON '20.

Undergraduate Teaching Assistant
Department of Computer Science, UCSB
Jan. 2020—Dec. 2021 — *Santa Barbara, CA*

- Provided one-on-one support for students in upper-division Data Structures and Algorithms classes, led review sessions, graded assignments.

Software Engineering Intern — Jobvite, Inc.
June–Sept. 2019 — *San Mateo, CA*

- Built integration testing framework for Jobvite's Candidate Scheduling interface with Selenium webdriver.
- Automated QA testing suite for web interface.

EDUCATION

University of Illinois at Urbana-Champaign
M.S., Computer Science (Expected 2026)
2022–Present

Technion, Israel Institute of Technology
International Student Exchange Program
March–Aug. 2022

University of California, Santa Barbara
College of Creative Studies
B.S. with Highest Honors, Computing
2018–2022

TECHNICAL SKILLS

Programming: Python, C/C++, Java, Ruby, OCaml, JavaScript, HTML/CSS

Tools: Git, Docker, LaTeX, Unix Shell

Additional skills: Problem-solving skills, team collaboration, organization

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

LEADERSHIP AND SERVICE

Mentor, Google Summer of Code
Free and Open Source Silicon Foundation
Summer 2022

- Supervised two college students in developing and releasing an open-source CLI-based waveform viewer.

Director, SB Hacks
UC Santa Barbara's inclusive, student-run hackathon
2020–2021 — *Santa Barbara, CA*

- Led a team of fifteen organizers to plan and execute a large-scale virtual hackathon.
- Oversaw logistics including budget management, virtual venue coordination, catering planning, website development, and outreach.