

Daniel Rudnick

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EDUCATION

University of Michigan

Ann Arbor, MI

Bachelor of Science in Computer Science

May 2026

GPA: 3.93 / 4.00

Coursework: Data Structures and Algorithms, Introduction to Computer Organization, Foundations of Computer Science, Introduction to Computer Security, Web Systems

WORK EXPERIENCE

Repacket, Inc

Remote

Software Engineer Intern

May 2024 - August 2024

- Contributed to the development of a low latency proxy server acting as a Secure Web Gateway, ensuring average response time remained under 1 second
- Implemented in C++ using OpenSSL and protocol buffers in a multithreaded environment
- Created various features and debugged network issues, working with network protocols at a low level
- Added machine learning and hashed based forms of malware detection, inspecting HTTP response data and blocking downloads of executables deemed to be malware
- Collaborated with other engineers to protect user sessions and ensure the security of all sensitive data sent upstream
- Developed test servers in Python utilizing Flask and Quart web frameworks
- Worked with various web APIs to log user traffic and alerts, providing companies with valuable user data.

PROJECT EXPERIENCE

Personal Project: Grocery List App

Swift

- Developed a macOS grocery list app with features to add, delete, and toggle the completion status of items
- Utilized Core Data to efficiently manage persistent storage of grocery items in the app
- Implemented a responsive UI using SwiftUI for a seamless user experience
- Integrated the OpenAI API to allow users to input a recipe and receive a response with the necessary grocery items, which are displayed on-screen with the option to add them to the current list

Web Systems: Instagram Clone

Python, Javascript (React), SQL

- Built an Instagram clone with a mix of server-side dynamic pages (Flask) and client-side dynamic pages (React) to support core interactions such as likes, comments, and infinite scrolling.
- Created a REST API using Flask, enabling real-time updates and smooth interaction through AJAX for a responsive user experience.
- Deployed the application on AWS EC2 using Gunicorn and Nginx

Introduction to Computer Organization: LC2K Cache Simulator

C

- Developed a cache simulator for the toy LC2K RISC Architecture
- Engineered the cache with configurable parameters, including cache size, block size, and associativity, supporting various mapping and replacement policies

Personal Project: Snake Game

C++

- Computer game where a snake grows using the underlying linked list data structure
- Skills Gained: Implementing linked lists, object-oriented programming, ncurses library for the game interface

LEADERSHIP AND VOLUNTEER EXPERIENCE

Delta Upsilon - University of Michigan Chapter

Ann Arbor, MI

President

June 2023 - May 2024

- Oversaw undergraduate chapter operations, collaborating with Delta Upsilon International Headquarters and the local alumni association.

SKILLS

Languages: C/C++, Python, Java, SQL, HTML, CSS, Javascript (React), Swift

Skills: Multithreading, TCP/IP, API Design, Computer Security

Tools: Git, Linux, AWS EC2, Docker, Bazel, Makefiles, GoogleTest, Jira