

# Matthew Prock

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## EDUCATION

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### University of Michigan

Bachelor of Science in Computer Science and Cognitive Science; minor in Art and Design

**GPA: 3.72/4.00**

Residential College— *living+learning community emphasizing arts and humanities, an intensive foreign language program, and fostering tight-knit community within a large university*

**Relevant Coursework:** Web Systems, CS Foundations, Data Structures & Algorithms, Statistics & Data Analysis, Discrete Math

Ann Arbor, MI

Expected May 2026

## SKILLS

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**Programming Languages:** C++, Python, HTML, CSS, SQL, JavaScript

**Frameworks:** React, Flask

**Developer Tools:** Git & managing programming workflow; Bash/shell scripting

**Non-Technical:** Fluent in English, conversational and written proficiency in Spanish; user interviews & user research

## PROGRAMMING PROJECTS

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### Scalable Search Engine

- built inverted index containing thousands of web pages with Mapreduce pipeline utilizing tf-idf for information retrieval
- features REST API app to return search results in JSON format & search server which displays interface for users to view results

### Insta485

- client side dynamic Instagram clone; features login/logout, post creation, likes, comments, and “explore” page functionality
- homepage features infinite scroll, liking posts by double-clicking, and automatic updates to likes and comments
- implemented REST API for routing and rendering pages

### Portfolio Website

- Self-styled static site (HTML, CSS) showcasing programming projects, design portfolio, work experience

### Snake Game

- Web-based Snake game; mechanics written in JavaScript

### Data Structures & Algorithms Projects (C++)

- Course projects explored breadth and depth-first searches, database management using hashing, implementing priority queues with pairing heap and binary heap, emulating STL code such as `std::string`, union find and path compression
- Received 100% on all projects, graded by accuracy of program output and efficient management of speed and memory

## RESEARCH EXPERIENCE

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### *Hazel* - Programming language research

Research Assistant at FPLab

Ann Arbor, MI

May 2024 – Sep 2024

- Assisted in programming language research through *Hazel*, a live functional programming environment which “understands, manipulates, and even runs incomplete programs, i.e. programs with holes.”

### *“Social media influencers and self-employment in the U.S.”* - social media research

Research Assistant at University of Michigan School of Information

Ann Arbor, MI

Feb 2024 – Present

- Research on impact of social media influencers’ content on viewers’ journeys and perspectives surrounding self employment
- Curated social media content for analysis, lead interviews, analyzed data and interview responses, wrote and revised sections of paper and assisted in the submission process

## WORK EXPERIENCE

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### The Michigan Daily

#### *Lead Illustrator*

#### *Illustrator*

Ann Arbor, MI

May 2024 – Present

May 2023 – Present

- Produces self-designed digital illustrations to accompany stories corresponding to article writers’ requests, to enrich stories for readers and increase visual engagement with article text
- Completes designs within 24 hours of receiving requests, balancing delivering illustrations before production deadlines while still producing high-quality design work
- Manages higher workload and contributes to more collaborative projects as *Nightly lead* illustrator

## AWARDS

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- James B. Angell Scholar at University of Michigan, awarded winter 2023-present
- University Honors at University of Michigan, awarded fall 2022-present
- Spanish Honors Society, awarded 2018-2022
- Illinois State Scholar and President’s Education Awards, awarded 2016-2022