

Rishi Barad

rishib@umich.edu • (248) 613-7474 • <https://rishibarad.github.io>

EDUCATION

UNIVERSITY OF MICHIGAN

B.S. Computer Science, B.S. Neuroscience

Ann Arbor, MI

December 2020

GPA: 3.3/4.0

Technical Skills:

C/C++, Python, NumPy, PyTorch, HTML, CSS, JavaScript, React, MySQL, Swift, Hadoop, Flask

Relevant Coursework:

Data Structures & Algorithms, Computer Architecture, Web Systems, Computer Vision, Computer Security

PROJECTS

**Reach out for code samples*

Instagram

- Developed a REST API with Flask and utilized React to generate a fully functioning Instagram clone, which was deployed using Amazon Web Service's EC2 server
- Built a scalable, interactive web app with infinite scroll, navigation history, and dynamic commenting and liking

Tetrino

- Recreated Tetris, the classic arcade game, using C++ on an Arduino microcontroller
- Utilized 1D vector rotation formulas to rotate tetrominoes and prevent collisions

Coordinate Path Finder

- Coded algorithms and heuristics such as Prim's, Arbitrary Insertion, and Branching & Bounding to develop a Minimum Spanning Tree or quick optimal solution to the Traveling Salesman Problem (visiting all coordinates and returning to the origin) for a given set of cartesian coordinates

Piazza Forum Post Classifier

- Utilized machine learning principles to create a program that computes probabilities for given data
- Developed accurate category label predictions for a given Piazza forum post

CPU Cache Simulator

- Developed a cache simulator using C to process assembly language instructions, transferring data between cache and memory to optimize program speed
- Allowed cache flexibility to accommodate direct-mapped, set- and fully-associative functionalities

EXPERIENCE

Michigan Medicine

Research Assistant

Ann Arbor, MI

October 2016 – July 2019

- Conducted a 3-year pilot study examining the impact of Transcranial Direct Current Stimulation (tDCS) on intensive therapy outcomes for people with aphasia under mentorship from Dr. Carol Persad
- Presented results at Harvard College's National Collegiate Research Conference

Frontier Promotions

Corporate Trainer - Intern

Ferndale, MI

April 2016 – August 2016

- Built brand recognition, increased customer acquisition, and raised brand loyalty for AT&T/DirecTV as well as other Fortune 500 companies and nonprofit organizations
- Promoted to the Corporate Trainer position, allowing me to interview and train new employees

ACTIVITIES

Michigan Hackers - Core iOS Team

- Collaborated with team members to develop the Michigan Hackers app for attendance tracking and event scheduling
- Integrating the backend infrastructure for the PhotoAssassin iOS game with Google's Firebase platform