Raavi Chowdhury

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Profile

Design-minded full-stack engineer with a passion for developing web technologies and software with revolutionary user experiences and a lasting positive impact on the communities that need them.

- ❖ Object-Oriented Programming (Java, C++)
- ❖ Scripting & Automation (Python, Ruby, PHP)
- ❖ Web Development & Graphic Design (React, Figma)
- ❖ Thorough experience with Version Control Systems
- ❖ Strong Writing Ability (Technical & Creative)
- ❖ Excels in Agile work environment

EDUCATION

B.S. Software Engineering, Rochester Institute of Technology | GPA: 3.37/4.00 | May 2023
Minor in Music & Technology

RELEVANT EXPERIENCE

Student Software Engineer, RIT Enterprise Web Applications — Jan. 2021 - Present

Developed a modern web experience for RIT's Division of Finance and Administration

- ❖ Corresponded directly with stakeholders while analyzing outdated web pages to develop requirements for the new environment
- ❖ Created wireframes and sitemaps to design optimal user flows with business goals in mind
- ❖ Built clean, contemporary pages for customers using Drupal 9 with special attention to ADA compliance and accessibility requirements
- ❖ Composed 21 page documentation for RIT's Drupal environment with breakdowns of key functions for customer maintenance
- ❖ Released seven concurrently developed projects which resulted in both user satisfaction and university-wide acclaim

Tools: PHP, Drupal 8/9 with Contenta, TWIG, MySQL, HTML, CSS, Bootstrap, Atlassian Jira

Software Engineering Intern, University of California Santa Barbara — Jun. 2022 - Aug. 2022

Assisted a SecLab research project regarding the detection of fake news on Twitter based on tweet propagation patterns

- ❖ Developed Python scripts to balance datasets, detect and set retweet depths, and apply domain-based heuristics with Twitter API, and ran Twitter datasets through machine learning models on PyTorch
- ❖ Recorded data and created documentation regarding datasets and scripts
- ❖ Discovered tweets containing falsified news with an average precision rating of .9378/1.0000 across >10,000 Tweet cascades

Tools: Python (NumPy, PyTorch, Tweepy, Pandas), Bash, Linux, Conda

Research Assistant, Vulnerability History Project - RIT — Jan. 2022 - May. 2022

Worked with Dr. Andy Meneely to support the open source Vulnerability History Project at RIT

- ❖ Developed and maintained Python scripts utilizing BeautifulSoup to scrape webpages to capture information about the latest CVEs
- ❖ Fixed bugs and maintained the web environment
- ❖ Discovered and updated our CVE data with more than 200 CVE entries

Tools: Python, Ruby on Rails, PostgreSQL, Node.js, Docker

SWEN/CS Tutor, Collegiate Science and Technology Entry Program at RIT — Feb. 2020 - May 2020

Guided RIT's CSTEP students through computing courses and fostered a caring learning environment

- ❖ Strengthened students' understanding of Software Engineering and Computer Science topics involving C, Java, Ruby, and Python
- ❖ Coached students to better their methods of writing & debugging code to efficiently progress through coding projects and assignments
- ❖ Helped students prepare for exams and practicums, resulting in an upwards trend in received grades

Tools: Java, C, Ruby, Python

PROJECTS

Nightclub Capacity Tracker

Developed a full stack application for tracking head-counts across multiple nightclub locations

- ❖ Developed responsive, mobile-ready frontend in React
- ❖ Built REST API in Flask to interact with Python backend
- ❖ Designed relational model and wrote DDL to define schema in PostgreSQL

Tools: React, Python, Flask API, PostgreSQL, Reactstrap

Page Discovery and Fuzzing Tool

Created an automated, customizable webpage discovery & fuzzing tool to discover vulnerabilities

- ❖ Designed fuzzing system to be highly configurable to fit a variety of vulnerability-seeking needs and utilized Python3's MechanicalSoup package to scrape pages for inputs and leaked data
- ❖ Built features to exploit 6 common vulnerability types including cross-site scripting, buffer overflows, and SQL injections
- ❖ Discovered all possible vulnerabilities in web application testing environment (DVWA)

Tools: Python, MechanicalSoup, Apache, MariaDB, Docker