RYAN JAIN

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EDUCATION

PURDUE UNIVERSITY, West Lafayette, IN

Dec 2024

B.S. COMPUTER SCIENCE

Cumulative GPA: 3.97 / 4.00

Relevant Coursework: Cryptography, Analysis of Algorithms, Systems Programming, Information Systems, Data Structures and Algorithms, Computer Architecture, Problem Solving and Object-Oriented Programming

Tools / Others Unix, Linux, GitHub, Git, Bash, Latex, Agile Project Management

Programming Languages Java, Python, C, SQL, MySQL, SQLite, ARMS Assembly, Arduino, HTML, CSS, R, C++

WORK EXPERIENCE

Rosen Center for Advanced Computing, Dr. Amiya Maji

Purdue University

RESEARCH INTERN

Aug 2022 - Present

- Created a new framework, using Microsoft Presidio, that identifies and anonymizes system logs and can be used for failure detection or diagnosis.
- Researched queries useful for executing standard actions from the data collected using XALT, a powerful tool to track the usage of an HPC Cluster.
- Created a guide on HPL benchmark usage and trained to perform different types of benchmarking.

Webee (Data Mine Learning Community)

Purdue University

Undergraduate Researcher

Aug 2022 - Dec 2022

- Contributed to finding a way to track assets inside facilities which cannot be tracked easily with GPS.
- Analysed and parsed datasets to perform triangulation and trilateration of asset devices.
- Refined skills in analyzing, handling, and processing data sets in Python using CSV and pandas packages.

Summer Undergraduate Research Fellowship (SURF), Prof. Aravind Machiry

Purdue University

SUMMER INTERN

May 2022 - Aug 2022

- Tested the framework implementing AFL Fuzzer to find common security issues in student submissions in programming courses using Bash Scripts.
- Created and conducted experiments using GitHub workflows that found crashes in 80% of assignments that had no crashes when tested using the conventional method.

TEACHING EXPERIENCE

CS 251 - Data Structures and Algorithms

Purdue University

Undergraduate Teaching Assistant

May 2023 - Present

- Assisted over 600 students with coding projects and homework and worked on writing solutions to their assignments.
- Answered students' questions on the online course discussion platform Ed and during in-person office hours.

CS 252 - Systems Programming

Purdue University

Undergraduate Teaching Assistant

May 2023 - Aug 2023

- Supervised labs and graded student exams and submissions weekly for more than 40 students.
- Assisted students with lab projects malloc, bash, shell script, and HTTP web server implementation.

PROJECTS

BOILERMAKER AIRLINES (JAVA, DATA STRUCTURES AND ALGORITHMS)

Dec 2022

- Built to determine the most efficient flight route for departure and arrival among different airports and regions.
- Implemented using Dijkstra and Kruskal's Algorithm.

SHELL IMPLEMENTATION (C, C++, LEX, YACC)

March 2023 - Apr 2023

- Shell interpreter that combines behaviors from common shells including bash and csh.
- Incorporated features such as line editing, signal handling, wildcarding, subshell, and more.

INVOLVEMENT_

BoilerMake (Executive Board - UX Team), Purdue University LaunchPad (Student Mentor), Purdue University

Apr 2022 - Present

Apr 2022 - Present