Aarya Bhatia

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EDUCATION

University of Illinois   Urbana-Champaign, IL
Bachelor of Science in Applied Mathematics, Minor in Computer Science   *Aug 2020 – May 2024*

- GPA: 3.7
- The Dean's List: Spring 2022

TECHNICAL SKILLS

Languages: C/C++, Python, Go, SQL, Bash, LaTex, Java, JavaScript
Frameworks: MongoDB, Node.js, Flask, Numpy, SFML, REST, OOP
Tools: Linux, Git, Vim, Docker, AWS (S3, EC2), Postman, Grafana, Heroku, VS Code
Interests: Backend, Problem Solving, Software Testing, Automation, Systems and Networking

EXPERIENCE

Course Assistant, CS 340: Introduction to Computer System   Aug 2022 – Present
University of Illinois   *Champaign, IL*

- Tutored 500+ students on system concepts and programming assignments in C and Python.
- Developed autograded and randomised questions on the Prairie Learn LMS

Software Developer   Jan 2023 – May 2023
University of Illinois   *Champaign, IL*

- Worked with Dr. Angrave Lawrence on a research project to make education more accessible.
- Implemented a glossary system for I-Notes, a text-based format of video lectures generated by video captions.

DevOps Intern   Jun 2022 – Aug 2022
Humantic AI   *Gurugram, India*

- Developed a Grafana monitoring dashboards with customized alerts on Email and Slack.
- Implemented a stand-alone Python plugin to expose application metrics to Prometheus.
- Developed shell script for continuous integration with Jenkins to deploy code on a remote server.

Software Developer   Mar 2022 – Dec 2022
University of Illinois   *Champaign, IL*

- Develop custom WordPress themes and API with PHP for CyberGIS project websites
- Implemented Python scripts for automated testing of Jupyter notebooks on CyberGIS infrastructure.
- Implemented a web-based calendar in PHP and integrated it with the Google Calendar.

Full-Stack Web Developer   May 2021 – Aug 2021
Aspire Impact   *Gurugram, India*

- Developed script to analyze survey responses to online behavioral assessments.
- Developed a full-stack website with Node JS for online assessments and report generation.

PROJECTS

CS 438, Communication Networks Project | *C*   Jan 2023 – Mar 2023

- Implemented a high-performance polling-based server and a multithreaded client CLI program following the *Inter Relay Chat* network protocol using the RFC 1459 specification, in pure C language.

CS 340, Intro to Computer Systems Project | *Python, Flask*   Mar – May 2022

- Implemented a microservice to generate and encode a random maze using Kruskal's disjoint set algorithm.
- Developed a middleware, caching, and validation services to manage many maze-generation servers.

CS 225, Data Structures Project | *C++*   Dec 2021

- Parsed the Open Flight airport dataset to construct a graph data structure using C++ class templates.
- Implemented various algorithms such as BFS, DFS, Page Rank, Dijkstra and Kosaraju's algorithm to find optimal flight paths between airports, rank the airports by importance and discover the strongly connected components.