

# Aarya Bhatia

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## EDUCATION

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### University of Illinois

*Bachelor of Science in Applied Mathematics, Minor in Computer Science*

Urbana-Champaign, IL

*Aug 2020 – May 2024*

- The Dean's List: Spring 2022

## EXPERIENCE

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### Course Assistant

*University of Illinois*

Aug 2022 – Present

*Champaign, IL*

- Tutored 500+ students on system concepts and programming assignments in C and Python.
- Developed new content for the course on Prairie Learn LMS

### Software Developer

*University of Illinois*

Jan 2023 – May 2023

*Champaign, IL*

- Worked closely 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

*Humantic AI*

Jun 2022 – Aug 2022

*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

*University of Illinois*

Mar 2022 – Dec 2022

*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

*Aspire Impact*

May 2021 – Aug 2021

*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

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### Inter Relay Chat | C

Jan 2023 – Mar 2023

- Implemented a high-performance polling-based IRC server and multithreaded client following the RFC 1459 specification.

### CS 340, Intro to Computer Systems | 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 service to manage many maze servers.

### CS 225, Data Structures | 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.

## TECHNICAL SKILLS

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**Languages:** C/C++, Python, Go, SQL, Java, Bash, MongoDB, LaTeX

**Frameworks:** Node.js, Flask, Numpy, SFML, REST, OOP

**Tools:** Linux, Git, Docker, Vim, AWS (S3, EC2), Postman, Grafana, Heroku, VS Code

**Interests:** Backend, Problem Solving, Testing, Systems and Networking