

# AAYUSH MAKHARIA

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## EDUCATION

### University of Illinois at Chicago

January 2021 - December 2022

*Master of Science in Computer Science (3.4/4.0)*

*Relevant Coursework:* Data Science, Development of Mobile Apps, Database System and Object-Oriented Language and Environments.

### Mumbai University

August 2016 - October 2020

*Bachelor of Engineering in Information Technology (8/10)*

*Relevant Coursework:* Data Structures and Analysis, Advanced Data Structures, Web Development and Cloud Computing.

## PROFESSIONAL EXPERIENCE

### Graduate Teaching Assistant

August 2021- August 2022

*Database Systems*

- Teaching and Assessment of activities for the delivery of the subject to the Graduate and Undergraduate students.
- Developed a CRUD based project with registration, authentication, and authorization and deployed it on Cloud.
- Collaborating with the faculty to conceptualize new assignments and refine the coursework to provide better understanding of the subject to the students.
- Leading and mentoring teams of students (45 teams) with their project and reviewing their work as a customer of their product to make it deployable in the market.

## SOFTWARE SKILLS

Programming Language: Java, JavaScript, C#, Python

Web Frameworks: React, Node, .NET, Spring, RESTful APIs

Technologies: AWS EC2, S3, Lambda, DynamoDB, MySQL

Operating Systems: Android, iOS, Linux

## INDIVIDUAL PROJECTS

### Covid Medical Lab Testing

February 2022 - May 2022

- Implemented a management utility to track tests and the results to provide an update on these tests whenever needed.
- Using multithreading to access the tests across multiple labs and multiple testing sites.
- Improved functionality by having lock-free threads thus maintaining safety and liveness in a non-blocking way.
- Created efficient mocks, unit and integration test ensuring 90%+ Java code coverage.

### Java Interpreter

October 2021 - November 2021

- Developed an Interpreter for Java source code as an Object using Java Parser Library in Java environment for interaction.
- Interpreted Java into a Python project implementing operation like binary, comparison, conditional, function invocation, sequencing, loop, and return.
- Java Parser Library is used to interpret and evaluate Abstract Syntax Tree of the Java Class, Objects and Method Calls.
- Implementation focused on the difference between lexical and dynamic scoping across different language.

### Spotify Data Analysis

February 2021 - March 2021

- Analysis of "Spotify" using web scrapping modules and "Spotipy", a lightweight python library for Spotify Web API.
- Data Analysis for gaining insights and patterns were performed on regional charts of India, UK, and USA during the COVID-19 Lockdown to judge whether the usage of Spotify increased during the lockdown.
- Data consisted of nearly 100,000 data points which was spread across 17 rows and consolidated for three regions.

### Tic-Tac-Toe App

April 2021 - May 2021

- Implemented a Tic-Tac-Toe playing app using the two threads which uses a Min-Max Algorithm.
- Each step played by the thread is displayed on the screen and the result is provided at the end of each game
- Communication between threads for Game results, opponent's move, game status and end of game was implemented.