

# Saif Masoud

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## EDUCATION

### University Of Massachusetts Amherst

Amherst, MA

*B.S Computer Science*

*Expected Graduation: Dec 2023*

- Fall 2022 Dean's List
- Major GPA: 3.5
- Coursework: Intro To Algorithms, Systems Programming, Computer Networks, Software Engineering, Linux System Management, Linear Algebra

### MassBay Community College

Wellesley MA

*A.S Computer Science*

*2021*

- Phi Theta Kappa Honors

## SKILLS

**Languages:** Python, Java, JavaScript, C/C++, SQL

**Frameworks:** React, Flask

**Developer Tools:** Git, Docker, Visual Studio Code, Bash, Linux

## PROJECTS

### Rubik's Solver | *Python, React, JavaScript, Docker*

[GitHub](#)

- Presented at MassBay STEM Expo 2020
- Programmed optimal 2x2 Rubik's Cube Solver using a Python backend, alongside an interactive React frontend
- Implemented a bi-directional breadth first search algorithm to improve efficiency
- Created a Docker container for simple installation

### Dynamic Programming Algo Visualizer | *Python, Qt*

- Implemented visualizations for dynamic programming algorithms such as Knapsack to help learners understand them
- Created a tabular view using the Qt framework to display the logic of each algorithms
- Added a step-by-step view of each algorithm, with play, pause, speed, and step-back options
- Built with object-oriented design to facilitate adding more algorithms

### Anki-OCR | *Python, JavaScript, HTML*

- Created a tool to convert handwritten flashcards into digital format compatible with Anki
- Decreased time needed to digitize flashcards by implementing mass import functionality
- Built a command-line tool with Python, as well as a webapp with JavaScript for cross-platform use

### SeniorChat | *Python, Flask, JavaScript, React*

- Implemented backend API and SQL database of video chat web-app for group hackathon project
- Incorporated the Twilio API to allow users to send SMS messages through the app

## EXPERIENCE

### Intramural Official

Sep 2022 – Present

*University of Massachusetts Amherst*

*Amherst, MA*

- Selected to officiate semi-final and final matches
- Attended regular meetings and matches

### Software Developer

Feb 2023 – Present

*BUILD UMass*

*Amherst, MA*

- Working on a mobile app for local computer vision business

### STEM Mentee

Sep 2019 – May 2021

*MassBay Community College*

*Wellesley, MA*

- Met with engineers at Mathworks and startups to learn about inner workings and practices of software engineers

## ACTIVITIES AND INTERESTS

- Played Varsity Soccer For MassBay