# Keeyon Hajjafar

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### Education

#### Northeastern University - Khoury College, Boston, MA

Sep 2023 - May 2026

MS in Computer Science ALIGN Program, GPA: 3.9 / 4.0

Coursework: Foundations of AI, Discrete Structures, Computer Systems, Database Management, Object-Oriented Design, Algorithms

## Case Western Reserve University - College of Engineering, Cleveland, OH

Aug 2017 - May 2021

BS in Mechanical Engineering

Coursework: Introduction to Java, Statistics and using R, Computers in Mechanical Engineering, Controls Engineering

# **Technical Knowledge & Skills**

Languages (Proficient): Python, Java, C, MATLAB, R, HTML, SQL, XML, CSS, JavaScript

Tools: Git, GitHub, OpenCV, PyTorch, NumPy, React, MySQL, JUnit, Ansible, UML Design, ERD (Crow's Foot), LaTeX Engineering: Certified SolidWorks Professional (CSWP), Lab Management Systems (LIMS), CAD and Vector Software

### **Projects** – Click here for more details and projects!

#### Doodle Dall-E — 1st place in Aesthetics at MakeHarvard 2025

Feb 2025

- A 3D printer caricature robot that captures the subject, generates a caricature, and autonomously draws it in ~8 minutes!
- Image processing pipeline from PNG to GCODE using tools such as OpenCV and OpenAI on a Python-based system.
- Challenges include system limitations of a raspberry pi when trying to integrate all parts together.

## News Crossword Puzzle — Weekly generated crossword puzzle from news headlines

Sep 2024 – Present

- Used JavaScript to design a flow to retrieve keywords and hints from top headlines using The News API and Gemini.
- Developed an algorithm to generate the crossword puzzle from collected keywords for play.
- Implemented React for the frontend, Node.js and MongoDB for the backend, with deployment planned on AWS.

#### Clinical Trial Chatbot — User-friendly clinical trial analysis tool

Nov 2024 - Jan 2025

- Designed a Python backend to provide analysis on clinical trial data from natural language.
- Implemented tools such as Clinical Trials API and AI to create a pipeline for querying data and presenting results.

#### Stock Market Predictor — Multi-model single-stock predictor in Python

Feb 2024 - May 2024

- Achieved trend predictions with 44% accuracy using Markov Modeling and Reinforcement Learning.
- Trained models with data from Google Trends and Alpha Vantage API to enhance transfer learning.

## **Experience**

## International Health Strategies — Boston, MA

Jan 2025 – May 2025

Software Engineering Internship

- Building clinical trials website improving accessibility with various API's and web tools with over 500,000 trials.
- Designing tools such as a chatbot and machine learning models making clinical trial data more user-friendly.

### Northeastern University — Boston, MA

May 2024 – Present

Machine Learning Research Assistant at Transformative Robotics Lab

- Conducting research on path planning using deep neural networks, leveraging Python, MATLAB, and motion capture.
- Enhancing positional accuracy by 97.5% through the integration of AprilTags, OpenCV, and motion capture technologies.

### Northeastern University — Boston, MA

Jan 2024 - Present

Teaching Assistant for Algorithms and Java: Object-Oriented Design

- Providing supplementary material and teach recitations for two courses: Algorithms and Object Oriented Design.
- Managing grading, office hours, and one-on-one tutoring for classes of up to 350 students.

### CodeAdvantage — Boston, MA

Aug 2024 – December 2024

Instructor

• Created and taught coding and robotics lessons for children aged 7-13, fostering critical thinking and problem-solving.

#### Stevanato Group — Boston, MA

Oct 2022 - Sep 2023

**DDS/DCS Mechanical Scientist** 

- Conducted experiments on drug delivery systems and coordinated with clients for effective planning.
- Migrated lab database to LIMS, reducing qualification time by 80% and ensuring ISO compliance.