

# AMIT L. KRISHNAIYER

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## EDUCATION

### University of Illinois at Urbana-Champaign

Class of 2025

*Bachelor of Science in Computer Science & Mathematics, Minor in Astronomy*

- **GPA:** 4.0/4.0

• **Relevant Coursework:** Discrete Structures, Statistics and Probability 400, Fundamental Mathematics, Fall 2023: Introduction to Astrophysics, Computing in Astronomy, Graph Theory, Nonlinear Programming.

### Thomas Jefferson High School for Science and Technology

Class of 2022

- **Relevant Coursework:** Data Structures, Multivariable Calculus, Linear Algebra.

## WORK EXPERIENCE

### John Deere, Data Science Intern

May 2023 – (Present)

- Using **SQL**, **pandas**, and **statistical models**, I'm currently working in a team of 6 to create the first non-invasive system that can predict soil moisture, which will lead to higher crop yields for farmers.

### HireLogic, Natural Language Processing Intern

July 2022 – August 2022

- My work is used in HireLogic's software that analyzes a candidate's performance in an interview.
- Employed **Natural Language Toolkit (NLTK)** and **sckit-learn** to identify and separate relevant questions from small talk in an interview transcript, so that only the candidate's responses to relevant questions are graded.
- Achieved a novel 87% accuracy in sorting interview questions using **Support Vector Machines** in my model.

### Boston University, Student Researcher

March 2020 – August 2021

- Researched under Professor David Starobinski (ECE) + team– results have future implications in autonomous vehicles.
- Utilized a Software Defined Radio (SDR) and reverse-engineering tools like **GNU-Radio** and **Inspectrum** to create a program to extract information from **Amazon Sidewalk** waves.
- The research created a distance/velocity-measuring radar that uses **5 magnitudes** less bandwidth than a traditional sensor with the same accuracy.
- Presented at BU RISE Program & New England Workshop on SDR 2021 conference.

### Corsha, Test Automation Intern

July 2020 – August 2020

- Improved Corsha's test automation infrastructure (on the backend). Corsha is an API security company.
- Wrote automated scripts in **bash** that tested Corsha's **Distributed Ledger Network (Blockchain)**.
- Used **Jenkins** to verify that the test scripts work and **Docker** to run scripts.

## EXTRACURRICULARS/PROJECTS

### HackIllinois 2023 1<sup>st</sup> Place Winner, John Deere Track

February 2023

- HackIllinois is UIUC's premiere collegiate hackathon, with **750 participants** competing from Midwest universities.
- In a team of four, we created a full stack web-app that can categorize images and descriptions of trash into separate categories: glass, compost, recyclables, hazardous waste, metals, and residual waste.
- I utilized **AWS S3** to store and access large datasets/models, and **yolov8/neural networks** to train our image classifier to detect general objects. Also used **AWS EC2** to minimize overload on personal laptop.

### Illini Blockchain, Smart Contract Developer, Incoming Developer Lead

January 2023 – (Present)

- Utilized **Solidity** and **Typescript** to create a decentralized application that crowdsources donations of Ethereum to charities.
- Published an article about Crypto Academy Blockchain Class on Illini Blockchain's Medium.

### Automated Video Assistant Referee for Soccer

August 2021 – May 2022

- Automated the process of determining whether a soccer player is offsides. Presented at tjSTAR to **1000+ students**.
- Used **PyTorch** to train my own custom ball detection model, **OpenCV** to identify players, **k-means** to sort players by team, and **matplotlib** for goal-line detection.

## HONORS/SKILLS

- **Languages:** Python, C++, Java, Typescript (Proficient), Bash, Node.js, R, Solidity, SQL, Swift (Comfortable)
- **Tools:** PyTorch, Natural Language Toolkit, Selenium, Github, Amazon Web Services, React (Proficient), XGBoost (Comfortable)
- **Other Honors:** TEDxTJHSST talk (to be uploaded in summer 2023), James Scholar (Top 12% of UIUC students), Eagle Scout (Patrol Leader for 5 years), Illinois Consulting Group Consultant