

# ALI AHMED KHAN

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## EDUCATION

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### Union College, Schenectady, NY

June 2022

Bachelor of Science in Computer Engineering, Minor in Mathematics

**GPA: 3.65, Dean's List, Union College**

2019, 2020

**Relevant Courses:** Neural Network, Intro to Databases, Data Structures, Algorithm Design & Analysis, Computer Network Protocols, Computer and Logic Design, Embedded Micro-controller.

## TECHNICAL SKILLS

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<b>Programming Language:</b>	Python, Java, C, JavaScript, Arduino, Bash, MATLAB, HTML, CSS, Pbasic, VHDL
<b>Framework &amp; Libraries:</b>	Node.js, Express, React Native, OpenCV, NumPy, Flask, Matplotlib
<b>Software &amp; Operating System:</b>	Linux OS, Mac OS (Unix), CAD, Quartus, LaTeX, Microsoft Office
<b>Other:</b>	Agile Framework, MySQL, Firebase, MongoDB

## RELEVANT EXPERIENCE

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### NezzHQ, San Francisco, CA

July 2020 - Present

*Software Engineering Intern (Remote)*

- Restructuring and adding new features in the backend of on-production iOS app "TooDeep" to improve response time using Nodejs and Express following Agile project management.
- Managing large user traffic of 456 weekly active users by utilizing databases and server-service using MongoDB, Firebase and Digital Ocean.
- Developing an AI bot using Tensorflow and Google AutoML Natural language to identify suicidal behaviors among users and provide helpful resources.

### Union EvoRobo Research, Schenectady, NY

January 2019 - Present

*Computer Engineering Research Assistant*

- Working on a physics simulator to optimize voxel based robots' movement through genetic algorithm for practical experiment using Java and Python.
- Implemented machine learning algorithms in order to find interesting behavior of tensegrity robot for space and land exploration using MapElites and Bayesian Optimization.
- Built firmware for control boards to communicate with Unix terminal through Bluetooth 4.0 using Python and Arduino.
- **Co-authored a journal "Behavioral Repertoires for Soft Tensegrity Robots", published in IEEE SSCI2020 with Prof. John Rieffel.**

### The SAD Project

June 2020 - Present

*Software Developer*

- Creating a cross platform dating app with another engineer for a Facebook group to help the members with an organized, fast and efficient search system.
- Utilizing tools such as React Native, Firebase, Socket.io, and Jira.

### Computer Engineering Department, Schenectady, NY

January 2021 - Present

*Teaching Assistant*

- Graded assignments and tests by fixing coding errors and providing feedback to help students write more readable and maintainable code.
- Held office hours to consolidate students' understanding on topics covered in class.

## LEADERSHIP EXPERINCE

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### Union Robotics Crew, Schenectady, NY

September 2018 - Present

*President*

- Directing a multidisciplinary team of 18 members for the IEEE micro-mouse competition.
- Implemented a flood-fill algorithm with Python and Arduino language to solve a maze for the competition.

### Academic Opportunity Program, Schenectady, NY

June 2020 - Present

*Computer and Electric Engineering Tutor*

- Tutoring students with Computer Science and Electrical Engineering concepts along with fixing bugs for projects.
- Assisting Professors with grading and editing slides.

### Union College, Schenectady, NY

September 2020 - Present

*Resident Advisor (RA)*

- Helping 150 first year students to transition comfortably during the COVID-19 outbreak by following protocols.
- Building a community among the students by organizing inclusive programs in a safe environment.