

# DHRUV AGARWAL

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## Education

### University of Missouri, Columbia – Honors College

Anticipated Graduation: May 2024

- B.S. in Computer Science, Minor in Mathematics | **GPA: 3.8**
- Courses: Data Structures, Algorithms, Databases, Logic Systems, Objected Oriented Programming, Assembly

## Skills

- **Languages & Frameworks:** Python, C, Java, JavaScript, TypeScript, React.js, Bootstrap/SCSS, Jest, jQuery
- **Tools & Technologies:** Node.js, Discord API, Docker, Puppeteer, Selenium, Firebase, Figma, Git, Jira, UnrealEngine

## Experience

### John Deere

May 2022 – August 2022

Software Engineering Intern

Moline, IL

- Reduced 400+ employees' time to edit dealer settings by 95% by developing a webapp for toggling of user rights
- Utilized React.js, Node.js, TypeScript, and SCSS for frontend development, and Java & AWS for backend tasks
- Pulled from an Amazon DynamoDB database on AWS which contained data for over 5,000 feature toggles
- Developed unit & integration tests using Docker, Jest, and Puppeteer to prevent bugs from entering production

### Mizzou Informatics and Data Fusion Lab

August 2021 - Present

Undergraduate Research Student

Columbia, MO

- Simulated infrared ground truth imagery for explosive hazard detection by training ML algorithms with big data
- Trained AI/ML models through data collected by hemisphere camera collects over simulated environments in UE5
- Developed HoloLens augmented reality environments for use in US military operation simulations and trainings

### Mizzou Society of Asian Scientists and Engineers

March 2022 - Present

Founder & Treasurer

Columbia, MO

- Led the club to grow to its current size of 70+ members via social media engagement, outreach, and campaigning
- Oversaw over \$6,000 of club funds by allocating and planning a detailed budget plan throughout the school year

### Mizzou Computing Association

September 2021 – Present

Interview Prep Member

Columbia, MO

- Worked through and solved algorithmic coding problems by practicing and applying DS&A's in group settings
- Created a [Space Exploration](#) game in TigerHacks 2021 (3-day long hackathon) utilizing Python's Pygame library

### US Air Force Association's CyberPatriot Competition

August 2020 – May 2021

Varsity Team Captain

St. Louis, MO

- Wrote extensive Batch Scripts with PowerShell to optimize security settings for Windows computers and programs
- Led my team to qualify and compete in nationals, ending 6th out of 3000+ teams in AFA's defense competition

### MoonRock Technologies

June 2019 - August 2019

Software Engineering Intern

St. Louis, MO

- Developed automation tests to ensure the functionality of 20+ websites hosted/managed by MoonRock Tech
- Test cases were written using Selenium and Node.js, leading to over 13+ fatal bug catches and eventual fixes

## Projects

### MUCourses | [MUCourses Website](#) | *JavaScript, jQuery, Chart.js, Bootstrap, Google Firebase* July 2022 – August 2022

- Search engine that provides lookup functionality for grade distributions, storing data for over 140,000 past classes
- Displays data over 90% faster than MU's official grades website, with additional search filters and neater statistics
- Emphasis on the display feature of grade distributions, presented in elegantly formatted graphs with Chart.js

### Truman Bot | *Python, Discord API, Matplotlib, BS4, RegEx*

May 2022 – July 2022

- Online bot hosted on the cloud utilized in 10+ Mizzou affiliated servers with over 2,000 Mizzou students total
- Functionality for 30+ commands, such as dining hall menus and hours, directory lookups, grade distributions, etc.
- Search commands rely on RegEx searching to parse and interpret the user's request to provide accurate data

### SpeechKing | [SpeechKing Website](#) | *React.js, TypeScript, Google Firebase, Bootstrap*

March 2020 - April 2021

- React web app used to manage 120+ student schedules, store & display data, and provide sign-in functionality
- Web app is used to help impoverished students in other countries learn English through one-on-one tutoring
- Increased the efficiency of lesson scheduling and planning by over 300%, ensuring a structured scheduling system