MUHAMMAD **AREEB YOUSUF**

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Languages: Python, Java, C, C++, CSS, HTML, JavaScript

Undergraduate Software Engineer seeking an opportunity in an internship or co-op interested in AI software and application development.

EDUCATION

University of Central Florida (UCF) | Bachelor of Science in Computer Science (BSCS) August 2021**- Spring 2025**
University of Central Florida (UCF) | Master of Science in Computer Science (MSCS) Spring 2025**- Spring 2026**

- **Courses**: Computer Logic & Organization, Computer Science 2, Discrete Mathematics, Security in Computing
- **Extracurriculars**: KnightHacks Club, Google Developer Student Club,
  Society of Hispanic Professional Engineers Club (SHPE), Knights Experimental Rocketry Club (KXR), AI@UCF

SKILLS

- **Technologies:** Git, NumPy, Linux/UNIX, SharePoint, Blender, Unreal Engine, API, Unity, TensorFlow, React.js, Selenium, BeautifulSoup
- **Hard**: Object-Oriented Programming (OOP), Database System Management, Data Analysis, Web/App Development, 3D Modeling, Virtual Reality (VR)/Augmented Reality (AR) Development, Data Mining, Web Scraping, Algorithms & Data Structures
- **Soft***:* Problem Solving, Creativity, Leadership, Project Management, Interpersonal Skills, Communication, Teamwork, Adaptability
- **Languages***:* English (Fluent), Urdu (Fluent), Hindi (Fluent)

WORK EXPERIENCE

NASA |Modeling, Simulation and Programming Intern | Software Engineer **August 2023 –**Present

- Engineered autonomous safety and surveillance tools for launch control systems by using data migration to enhance mission planning and training regarding Artemis II, III.
- Created immersive VR/AR environments while utilizing 3D modeling tools for specialized human ergonomics study for ground support systems and crew to simulate mission tasks, assisting with the Artemis II & III launches.
- Developed a new data analysis tool that supports other cross-platform software applications for human ergonomics, which benefited not only my Ground Exploration team, but also other NASA centers.
- Leveraged 3D printing services with guidance from my assigned mentor to design tools for human ergonomic VR simulations, offering Artemis crew and support members more control over the virtual environment, leading to more accurate results.
- Documented project details while collaborating with a group of 2-3 people for lab simulation and VR testing and working with another group of 3-6 programming teams that helped develop the data analysis tool utilizing autonomous software.

Konnect | Database and Systems Management Intern **Oct 2022 -** Present

- Collected, researched, and systemized data for database by giving users the ability to make friends through made app preferences.
- Built and upgraded databases through relevance in A.I. ranking for app development that helped improve user experience.
- Collaborated with a team of researchers across universities, creating safe systems and algorithms for adolescent safety, algorithm used for social media platforms like Instagram.
- Innovated processes of data usage & elevated project infrastructure with my team which led to increased funding for my department

Socio-Technical Interaction Research Lab| Research Assistant **May 2022 - August 2022**

- Spearheaded research activities, focusing on the interpretation and investigation of adolescent risk and safety.
- Evaluated extensive data annotating approximately 9,000 data annotations weekly while actively collaborating with team mentors.

PROJECTS & EXPERIENCE

ARbotics | Shellhacks | HTML, CSS, JavaScript, Python **Fall 2024**

- Integrated AI, web development AR, and robotics (all within a 6-hour time frame) with my group to aid people with disabilities by leveraging audio-visual speech recognition technology to provide real-time information about obstacles and surroundings.
- Enabled a user-friendly interface that solves communication problems for the deaf by providing literacy practice and educated the visually impaired with a mobility cane equipped with sensors for object detection, bridging the digital and physical worlds together.

Generic Skip List (Sorted Set) **| Java** **Summer 2023**

- Developed and maintained a balanced multi-level structure for efficient insertion, deletion, and search operations by implementing dynamic node height adjustments.
- Conducted thorough testing on various dataset sizes and edge cases to successfully contain Skip List into algorithms and applications.

GPS System | Java **Summer 2023**

- Implemented Dijkstra's, Bellman-Ford, and Floyd-Warshall algorithms to compute optimal paths from a coordinate-based graph input file to construct diverse graphs for analysis, helping people get from point A to B.
- Compared algorithms by inputting coordinates/building graphs for encompassing paths, distances, and performance metrics.