MOEZ ULLAH KHAN

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EDUCATION

University of Oklahoma   Norman, OK
Bachelor of Science in Mechanical Engineering | Minor in Computer Science | GPA: 3.54   **May 2024**
Relevant Coursework: Introduction to Java, Programming Structures and Abstractions, Data Structures, C Programming Course, Discrete Math Structures, Solid and Fluid Mechanics, Thermodynamics, Heat Transfer, Design of Mechanical Components

SKILLS AND CERTIFICATIONS

Skills: Python, Java, C++, JavaScript, C, HTML, CSS.
Technologies: Visual Studio Code, GitHub, PyCharm, Arduino, SolidWorks, LabView, NI Multisim.

WORK EXPERIENCE

School of Computer Science, University of Oklahoma   Norman, OK
Research Assistant, Dr. Richard Veras / Enhancing Image Quality using Machine Learning   Mar 2023 – Present
- Developed a Python program to simulate a sophisticated 3D environment with realistic lights, lenses, camera and physical laws.
- Utilized NumPy, PyTorch and other relevant tools to program an AI agent capable of modifying multiple parameters to minimize errors in the generated image.

Gallogly College of Engineering, University of Oklahoma   Norman, OK
Diversity and Inclusion Peer Tutor   Aug 2022 – Present
- Tutored a group of 6+ students with computer science and software engineering classes including Java, C++, Python and JavaScript.
- Led 5+ math tutoring sessions for engineering students including calculus courses.

PROJECTS

Machine Learning-Based Lens Configuration Optimization in Optical Devices   [View Project]
- Programmed a 3D engine using C++ and Python, to simulate a camera with multiple lenses.
- Implemented 5 advanced algorithms, including Software Rendering and Ray Tracing to incorporate physical Laws into the scene.

Multi Page and Dynamic Website Development   [View Project]
- Designed a dynamic website, "Discuss", utilizing HTML, CSS, and JavaScript, allowing users to navigate through multiple pages and engage with the uploaded posts.
- Programmed the functionality to enable users to switch between light and dark themes, enhancing the user experience.

Game Development: Bounce Game   [View Project]
- Led a team of 2 developers in the creation of"Ball Bounce Game", using the KISS IDE and the C Programming Language.
- Coded the display and the game play mechanics, enabling users to move a horizontal bar to strike the ball and gain points.

Simulation Development: Snell's Law   [View Project]
- Engineered a real-time simulation of Snell's Law, leveraging the power of C Programming Language.
- Crafted the logic to empower users to interact with the simulation, dynamically adjusting various factors to observe their changes.
- Composed essential algorithm to accurately incorporate the laws of optics in the simulation.

LEADERSHIP AND PARTICIPATION

Computer Science Student Board   Norman, OK
Executive-Chair   May 2021 – Present
- Communicated with multiple organizations to gather volunteers for the club's first-ever mock interview session
- Collaborated with a team of 9 students to coordinate event logistics and promote the event

Freshman Engineering Showcase   Norman, OK
Modeling Lead   May 2021
- Supervised a group of 7 people to design and assemble a mechanical arm that works on hydraulic system
- Modeled and printed a mechanical arm using Solidworks and received special recognition for the fully functional model

AWARDS

- Patti Wilson Scholarship: $8000 awarded on academic achievements, leadership experiences, and career goals   May 2022
- Rita Scholarship: $1,500 awarded for leadership activities and community service   May 2022