

D M Raisul Ahsan

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Education

Stanford University, Stanford, CA – Sep 2021 - June 2023 (Expected)

MS in Computer Science

The University of New Mexico (UNM), Albuquerque, NM – Jan 2018 - July 2021

BS in Computer Science (with Honors in Thesis, *Summa Cum Laude*, GPA: 4.19)

- Thesis paper: *Designing Interactive Murals*, [download](#)
- Outstanding Junior Award - UNM School of Engineering Annual Awards 2020

Experience

Graduate Research Assistant, IxD Research Group, Stanford University – Sep 2021 - Present

- Implementing support for multiple themes and storylines in a narrative-based fitness app.
- Upgrading and designing APIs for the app to ensure seamless data collection and efficient data visualization.

Undergraduate Research Assistant, Hand and Machine Research Group, UNM – Feb 2020 - July 2021

- Designed a hardware-software integrated system for novel large scale outdoor interactive murals.
- Built embedded systems utilizing Raspberry Pi, microcontrollers, and sensors to respond to human interactions, record weather data, and wirelessly communicate with the server and the database.
- Devised a communication system utilizing I²C and HTTP protocols to ensure synchronized transfer of data with minimal loss of significance from sensors to database through different layers of the system.
- Developed a database and a web interface for real-time visualization of interactions on the physical murals.

Undergraduate Research Assistant, Department of Computer Science, UNM – May 2020 - Jan 2021

- Collaborated on extending DIG - a tool for generating linear and nonlinear numerical invariants at arbitrary locations of C and Java programs using symbolic states.
- Devised a novel heuristic approach to find the maximum degree of invariants in the form of nonlinear equality involving non-factorable polynomials with the help of numerical analysis of the concrete states.

Teaching Assistant, Department of Computer Science, UNM – Jan 2020 - Dec 2020

- Administer laboratory classes for the 'Design of Large Programs' course, instruct students on how to use different tools related to writing software in Java, and evaluate the projects submitted by the students.

Personal Projects

- **IndoorNav Systems, UNM CTSC Hackathon and NIH Grant winner:** A software-based system that utilizes QR codes to help patients and staff navigate inside hospitals.
- **US Covid-19 Data Visualization:** An animated interface that allows users to visually compare the Covid-19 conditions of multiple states.
- **Voice Chat Application:** A voice chat application that utilizes Google's Text to Speech API.

Technical Skills

- **Programming:** Java, Python, JavaScript, C, C++, Scheme, Haskell, MATLAB, R
- **Tools and Technologies:** Android Studio, Git, MySQL, Google Cloud, SageMath, Scikit-learn
- **Web:** React, Node.js, HTML, CSS
- **Others:** Raspberry Pi, Arduino, Node MCU