

Anish Bhardwaj

Sunnyvale, CA 94086

anishbhardwaj2023ozerd_twg@indeedemail.com

+1 669 264 8383

Software Engineer versed in Machine Learning, Product Development, and Research with Agile Methodology Experience.

California, 94086

[LinkedIn Profile Link](#)

Work Experience

Researcher

MIDAS IIITD - Delhi, Delhi

December 2019 to March 2022

Researcher at the Multimedia Computing Lab known as MIDAS. Worked on an end to end system to generate and visualise Interior Design Choices.

Also worked on Recommendation engines (ML, Collaborative Filtering).

Software Engineer Intern (ML & Data Science)

Autodesk

May 2021 to August 2021

Worked on a project to automate Sales Lead Generation for the GRO Team using Python (Libraries - Numpy, Pandas, SkLearn)

Software Engineering Intern

Venvidi Media PL - Bengaluru, Karnataka

May 2019 to August 2019

Automation of the Data Manipulation Process used in Market Studies, Financial Projections, Defining Cashflow, etc.

Researcher and Lab Member

LCS2 - Delhi, CA

December 2018 to May 2019

Research in the fields of Natural Language Processing, Deep Learning, Machine Learning, and Social Media Analysis

Education

Master's degree in Computer Science

Northwestern University - Chicago, IL

January 2022 to Present

Skills

- Python
- Java
- SQL
- NoSQL
- C
- Linux
- Salesforce
- UI
- UX
- Research
- Docker
- Design thinking
- Computer operation
- Product development
- Design research
- Deep learning
- Laboratory experience
- Analytics
- Pandas
- Machine learning
- NumPy
- Agile
- Sales
- Lead generation
- Natural language processing
- Social listening
- Interior design
- Data analytics
- Computer vision
- Research laboratory experience
- Data science

Links

<https://www.linkedin.com/in/anish-b-00109695/>

Awards

Zoohackathon 2018

December 2018

1st place Asia Pacific, 2nd Place Global

Game Design Hackathon 2018

June 2018

1st Visuals, 1st potential, 3rd Playability

Technovation Challenge India 2018

April 2018

2nd Place Across India

Dean's List 2019

September 2020

Dean's List Award for Innovation, Research, and Design.

Publications

Eye Gesture Based Communication for People with Motor Disabilities in Developing Nations

<https://ieeexplore.ieee.org/document/8851999>

June 2019

Current eye tracking systems for people with motor disabilities are expensive, restricted to only four eye movements, require constant re-calibration, assume literacy in English and offer no easy method to contact people during emergencies. Even though the above systems are flawed, they are crucial for the aforementioned individuals to communicate. Despite this, our surveys show that no such systems are in use for people in developing countries and there is a heavy dependence on simple yes or no answers. To overcome these obstacles we created E-ACE (Eye-based Alternative Communication Exchange) : A smartphone based system that allows the user to utilize nine eye movements rather than the traditional four. Our surveys show that many people with motor disabilities have difficulties in performing the conventional four eye movements. To counter this, E-ACE allows each user to create a personalized system which consists of their preferred four eye movements from a set of nine (four traditional, five new). To overcome the language barrier that many people face while using the current systems, E-ACE provides easy to understand pictures for a list of relevant English words and phrases which was curated from the doctors we surveyed. E-ACE also lets the user access an SOS Board that can call, message and alert the concerned people with just two eye movements. Thus, E-ACE offers a robust, portable and low-cost solution which solves the problems faced with current systems. Our Evaluations and User studies show that E-ACE has good user experience, is easily adopted by non-English speaking individuals, and is cost-effective, making it accessible to people in a developing nation.

Synthesized 3D Models with Smartphone Based MR to Modify the PreBuilt Environment: Interior Design

<https://dl.acm.org/doi/pdf/10.1145/3444685.3446251>

December 2020

The past few years have seen an increase in the number of products that use AR and VR as well as the emergence of products in both these categories i.e. Mixed Reality. However, current systems are exclusive to a market that exists in the top 1% of the population in most countries due to the expensive and heavy technology required by these systems. This project showcases a system in the field of Smartphone Based Mixed Reality through an Interior Design Solution that allows the user to visualise their design choices through the lens of a smartphone. Our system uses Image Processing algorithms to perceive room dimensions alongside a GUI which allows a user to create their own blueprints. Navigable 3D models are created from these blueprints, allowing users to view their builds. Following this, Users switch to the mobile application for the purpose of visualising their ideas in their own homes (MR). This System/POC showcases the potential of MR as a field that can be explored for a larger portion of the population through a more efficient medium.