

Mohd Zubair

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[Portfolio](#) | [LinkedIn](#) | [Google Scholar](#)

EDUCATION

Indraprastha Institute of Information Technology, Delhi	August 2024 – Present
PhD in XR and Design	
Chandigarh University, India	May 2021 – September 2023
Master of CAD/CAM Engineering	CGPA: 8.38/10
Chandigarh University, India	August 2016 – July 2020
Bachelor of Mechanical Engineering	CGPA: 7.11/10

SELECTED DOCTORAL COURSEWORK

User Experience Design of XR (UDXR), Tangible User Interfaces (TUI), Cognition and Information Processing in Design, Computer-Aided Design (CAD), Design Research Methodology, Ubiquitous Computing.

RESEARCH EXPERIENCE

Human-Centered Design, IIT Delhi, India	August 2024 – Present
Doctoral Researcher and Teaching Assistant - Creative Interfaces Lab	
- Designed and evaluated tangible XR systems for CAD learning through controlled user studies. - Developed BoxCraft, a tangible mixed reality interface for 3D modeling. - Built XR prototypes using Unity and electronics-based tangible interfaces. - Published and presented research in leading HCI and XR venues, including IEEE VR and ACM CHI.	
Empathic Computing Lab, University of South Australia	September 2024 – October 2024
Research Intern - Link	
- Developed VR/MR environments and task-based simulations across positive, negative, and neutral contexts. - Analyzed the impact of these environments on user perception, learning, and information processing.	
CARE-DAT, IIT Delhi	October 2023 – November 2023
Research Intern - Link	
Project: Rectification of design errors in the Exoskeleton device (RoboExo SMART) - Video	
Addressing design challenges in the RoboExo Upper Limb Rehabilitation Robot using SolidWorks.	
Divine Lab, IIT Delhi	March 2023 – June 2023
Virtual Reality Intern	
Project: Exploring the Aesthetic Characteristics of CAD Models via Virtual Reality.	
- Developed CAD models using Fusion 360 and SolidWorks, transforming them into virtual spaces with Autodesk VRED. - Altered color, shape, size, material, and joints in virtual reality using Meta Quest 2, enhancing model aesthetics.	
Chandigarh University, India	May 2021 – September 2023
Research Scholar	
Master's Thesis: Alteration of Aesthetic Properties of CAD Model using Virtual Reality Technology - Link (Video)	
- Developed interactive features within the virtual environment for users to modify the aesthetic properties of the model. - Produced a comprehensive thesis, providing insights and recommendations for the application of VR in CAD modelling.	
Chandigarh University, India	August 2016 – May 2020
Bachelor's Thesis: Design of low-cost, small-sized portable refrigerator - Link	
Developed hand-gesture and obstacle-avoiding robots, and an Arduino-based GSM/GPS alert system.	
TSC Technologies Pvt. Ltd, Bangalore	June 2022 – December 2022
Design Intern - Link	
Project: Development of NanoSatellite	
Acquiring knowledge from scientists at ISRO (Indian Space Research Organization)	

PUBLICATIONS

Journal Articles

- **Zubair, M.**, and Srivastava, A. "Taxonomy of Tangible Extended Reality and CAD Education: A Systematic Literature Review (2015–2026)." ACM Transactions on Computer-Human Interaction (TOCHI) – **Under Review**
- Mishra, A.*, **Zubair, M.***, and Srivastava, A. "VacuDrag: Enabling Variable Friction Effects on Real Surfaces in Wearable (Finger-Worn) and Non-Wearable Formats." IMWUT (UbiComp/ISWC) 2027 – **Submitted**

Conference Papers

- **Zubair, M.**, Muralidhar, S., Bhatt, A., and Srivastava, A. "Reality to CAD: A Cross-Reality Workflow for Physical-to-Digital 3D Modeling" CHI 2027 – **Submitted**
- **Zubair, M.**, "Tangible Extended Reality for CAD Education," CHI 2026 Doctoral Consortium (SMP Cohort) – **Accepted**
- **Zubair, M.**, Bharti, V., and Srivastava, A. "BoxCraft: Tangible Mixed Reality for CAD Modelling" IEEE VR 2026 (Posters) - [doi: 10.1109/VRW70859.2026.00202](https://doi.org/10.1109/VRW70859.2026.00202)
- **Zubair, M.**, Bharti, V., and Srivastava, A. "A Tangible Mixed Reality System for 3D Modelling" IEEE VR 2026 (Research Demonstrations) - [doi: 10.1109/VRW70859.2026.00374](https://doi.org/10.1109/VRW70859.2026.00374)
- **Zubair, M.**, Singh, K., and Sehgal, A. K. "The Significance of Virtual Prototyping in Reducing Design Risk and Accelerating Product Innovation," ICCCNT 2023 - [doi: 10.1109/ICCCNT56998.2023.10306407](https://doi.org/10.1109/ICCCNT56998.2023.10306407)
- **Zubair, M.**, Sehgal, A. K., and Singh, K. "Recent Development in 3D & 4D Printing Technology" ICASE 2022

* Equal contribution by the first two authors.

PATENTS

- Abhijeet Mishra, **Mohd Zubair**, and Anmol Srivastava. "VacuDrag: Enabling Variable Friction Effects on Real Surfaces in Wearable (Finger-Worn) and Non-Wearable Formats" – Patent Filed, 2026
- **Zubair Mohd**, Hermehar Pal Singh Bedi, Anmol Srivastava. "Turban Headstrap for Head-Mounted Display." Patent Application No. 202511086930, filed 2025 (under review).

SCHOLARSHIPS AND AWARDS

- DEIA Grant, IEEE VR 2026 (₹ 2,000,000) - [Link](#)
- Top 25, Logitech DevStudio 2026 (\$600 Award)
- ACM India PhD Fellow, ARCS 2025 and 2026 - [Link](#)
- Recipient of Doctoral Fellowship, IIIT Delhi
- Academic Scholarship, Master's Program, Chandigarh University - [Link](#)
- Skill India Scholarship, 2021

SKILLS

Software: Unity, SolidWorks, Autodesk Fusion 360, ANSYS, Autodesk VRED, Autodesk Revit.

Hardware: Meta Quest 3, HoloLens, HTC Vive Pro 2.

Programming: C#, Python, C++

Prototyping: 3D Printing, Rapid Prototyping, Electronics Prototyping.

LEADERSHIP EXPERIENCE

- Student Volunteer, ISMAR 2026 - [Link](#)
- Student Volunteer, IEEE VR 2026 - [Link](#)
- Teaching Assistant, IIIT Delhi (UDXR, Machine Learning, Design Research)
- Student Mentor, MTech and PhD students, IIIT Delhi (2025)
- Conducted workshops and demo lectures on XR/HCI (IIIT Delhi, O.P. Jindal Global University) - [Link](#)
- Lab Representative, Creative Interfaces Lab, India Mobile Congress, 2024 - [Link](#)