# Muhammad Talha

Canada | +1 825-888-5503 | talha4@ualberta.ca | talha4 | M-talhaa | muhammadtalha.netlify.app

## Profile

Multidisciplinary researcher and builder working across human-computer interaction, AR/VR, computer graphics, software systems, machine learning, computer vision, signal processing, and engineering design. Recent work centers on AR-CAD, an augmented-reality CAD system for Meta Quest 3, along with think-aloud protocol analysis, Bloom's Taxonomy extension using machine learning, and EEG-based evaluation of cognitive load in design tasks.

Experienced in Unity/C#, Meta XR, Meta Quest, SteamVR, 3D interaction, raycasting, shaders/materials, spatial modeling, UX research, usability testing, qualitative/quantitative study design, NLP/ML pipelines, computer-vision workflows, and product-oriented research translation.

## Education

**University of Alberta** — Edmonton, Canada

*M.Sc. in Engineering Management (Thesis-Based) | GPA: 3.8/4.0* — *Jan. 2024 – Apr. 2026*

- **Thesis:** *How Interaction Modality Shapes Design Cognition: Evaluating Augmented Reality CAD Through Behavioral, Cognitive-Process, and Neurophysiological Evidence.*
- **Coursework:** Applied Machine Learning and AI; ML for Procedural Content Generation; Wearables and IoT; Intellectual Property and New Technology Commercialization; Ergonomics and Work Design.
- **Supervisors:** Dr. Ahmed Jawad Qureshi and Dr. Sehrish Javed.

**Lahore University of Management Sciences (LUMS)** — Lahore, Pakistan

*B.S. in Computer Science* — *Sep. 2019 – Jun. 2023*

- **Coursework:** Object-Oriented Programming, Data Structures, Algorithms, Operating Systems, Software Engineering, Machine Learning, Artificial Intelligence, Human-Computer Interaction, Topics in Design and HCI, Computer Graphics, Databases, Network Security, and ICT for Development.

## Publications and Preprints

- M. Talha, A. Mohiuddin, S. Javed, and A. J. Qureshi, **"Lowering Barriers to CAD Adoption: A Comparative Study of AR-CAD and a Traditional CAD Tool,"** ASME IDETC/CIE, 2025.
- M. Talha, J. Shi, and A. J. Qureshi, **"Extending the Cognitive Domain of Bloom's Taxonomy using Machine Learning,"** Research Square preprint, 2026; submitted to *Discover Education*.

## Research Experience

**Research Assistant** — Dec. 2023 – Present

*ADaMS Lab, University of Alberta* — *Edmonton, Canada*

- Designed and developed **AR-CAD**, a standalone augmented-reality CAD system for Meta Quest 3 using Unity, C#, and the Meta XR stack, supporting primitive modeling, spatial manipulation, object manipulation, scene composition, STL export, and in-environment concept evaluation.
- Supported University of Alberta **Report of Invention approval** for AR-CAD and contributed to its positioning as both a research platform and translational product concept for CAD accessibility and design education.
- Led a within-subject comparative study of AR-CAD and a traditional CAD tool with **20 participants**, collecting task performance, usability, workload, think-aloud, and interview data to evaluate barriers to CAD adoption.
- Built **Python NLP/ML pipelines** using Whisper ASR, spaCy, NLTK, sentence-transformers, and scikit-learn to classify time-aligned think-aloud transcripts and analyze cognitive-process patterns.
- Developed a **YOLOv8-based object detection system** for Durabuilt to detect assembly components, estimate production progress, and support worker-efficiency tracking through dashboard-oriented outputs.
- Developed **machine-learning and computer-vision workflows for wire arc additive manufacturing (WAAM)** using spectral/process data to classify materials with up to **97% confidence**, detect material interfaces, and identify WAAM process phases.
- Designed and piloted **EEG signal-processing workflows** using Emotiv hardware, event markers, baseline normalization, spectral bandpower, and ROI analysis to support multimodal evaluation of cognitive load during CAD tasks.
- Collaborated with cross-functional teams across engineering design, neuroscience, HCI, manufacturing, and commercialization to translate research prototypes into validated, product-oriented systems.

**Research Assistant** Nov. 2021 – May 2023
*CHISEL, LUMS* *Lahore, Pakistan*

- Designed and evaluated health-tech, VR, and assistive prototypes across **AssistTH**, RehabVR, **Meditare**, Rawaan, and **VR awareness training** using Figma, Unity, 3D environments, raycasting, shaders/materials, interviews, surveys, and usability testing.
- Built user flows, wireframes, prototypes, and research documentation for telehealth, rehabilitation, mental well-being, dyslexia support, and immersive training applications; implemented Unity-based VR environments using 3D interaction, raycasting, materials, shaders, environment design, and interaction scripting.
- Contributed to virtual-reality-based environmental enrichment for older adults with mild cognitive impairment and mild dementia, supporting literature review, intervention ideation, and evaluation-oriented product refinement.
- Worked on **Rawaan**, an Urdu-based remedial therapy tool for dyslexia, by checking product flows, reviewing audio assets, and identifying implementation issues before release.
- Supported a systematic review on assistive technology for elderly people in low- and middle-income countries by screening literature and reviewing more than 45 papers for inclusion relevance.

## Teaching Experience

**Teaching Assistant and Course Support** 2024 – Present
*University of Alberta* *Edmonton, Canada*

- Supported teaching and assessment activities for **ENGM 680: Applied Machine Learning and AI**, including course delivery and technical support aligned with graduate-level machine learning content.
- Serving as a Teaching Assistant for **MEC E 590: Statistics and Data Management for Engineers**, supporting course delivery, assessment, and student learning in applied statistical methods and data handling.
- Contributed to marking and instructional support for **MEC E 300: Mechanical Measurements** and **MEC E 390: Numerical Methods**.
- Provided course development support for **MEC E 265**.

**Head Teaching Assistant** Jan. 2023 – May 2023
*LUMS* *Lahore, Pakistan*

- Led teaching assistant operations for **CS 331: Introduction to Artificial Intelligence**, managing course logistics, grading, and supervision of other TAs for assignments, quizzes, and exams.
- Managed two sections of **CS 200: Introduction to Programming** with approximately 130 students each, organizing labs, assignments, quizzes, exams, and weekly tutorials and office hours.
- Served as TA for **CS 100: Computational Problem Solving**, managing labs, quizzes, and tutorials for a class of approximately 60 students.

## Innovation and Commercialization

**Incubator Participant, AR-CAD Venture Development** Mar. 2026 – Present
*Innovation, Creativity and Entrepreneurship (ICE) Engineering Incubator, University of Alberta* *Edmonton, Canada*

- Joined the ICE Engineering Incubator to advance AR-CAD from a research prototype toward a technology venture through mentorship, commercialization support, and structured venture-development activities.
- Refining customer segments, value proposition, product positioning, technical roadmap, and go-to-market direction for an immersive CAD platform focused on improving CAD accessibility and design education.
- Building on prior Lab2Market customer discovery, Mitacs commercialization work, and University of Alberta Report of Invention approval to strengthen the startup pathway for AR-CAD.

**Entrepreneurial Lead, AR-CAD Validation** Sep. 2025 – Dec. 2025
*Lab2Market Validate / Mitacs Business Strategy Internship* *Canada*

- Led customer discovery and validation activities for AR-CAD, conducting more than **100 interviews** to evaluate problem-solution fit, use cases, market needs, and commercialization opportunities.
- Developed market positioning, value propositions, and evidence for product-market fit to support a translational path from academic prototype toward higher technology readiness.

**Customer Discovery** Jan. 2025 – Mar. 2025
*Lab2Market Discover* *Canada*

- Explored user segments, industry pain points, and adoption barriers relevant to immersive CAD workflows, design education, and product commercialization.

## Professional Experience

**Instructor** Aug. 2023 – Oct. 2023

*Knowledge Streams* *Lahore, Pakistan*

- Delivered industry-oriented technical training in Python, data science, programming fundamentals, and MERN stack development for industry-referred trainees preparing for professional software roles.
- Designed hands-on coding labs and project-based sessions covering full-stack development, data analysis, debugging, Git workflows, and software-development practices.

**Associate UX Analyst** Apr. 2022 – Jun. 2023

*CureMD Inc.* *Remote, Pakistan*

- Improved UX for **US healthcare systems**, including EHR, Nightingale, and healthcare portals, by analyzing clinical workflows, identifying usability issues, and recommending product-focused interface improvements.
- Collaborated remotely with product, design, engineering, and QA teams across the US, India, and Pakistan to refine workflows, improve task clarity, and support patient/provider-facing digital experiences.

**Freelance Web & App Developer, and UI/UX Designer** Feb. 2020 – Apr. 2023

*Fiverr/Upwork/Private Clients* *Remote*

- Designed, developed, tested, and deployed web applications, portfolio websites, landing pages, mobile app concepts, and product-facing digital experiences for independent and client-based projects.
- Built front-end and full-stack applications using HTML/CSS, JavaScript, React, Node.js, Express.js, SQL, MongoDB, Firebase, Git/GitHub, Netlify, Heroku, and form/email integrations.
- Translated client requirements and user needs into user flows, information architecture, wireframes, interactive prototypes, responsive layouts, and implementation-ready interface designs.
- Created and improved UI/UX designs using Figma, usability feedback, heuristic review, accessibility-aware design, responsive design principles, and iterative redesign for web and mobile interfaces.
- Developed application features such as posting workflows, dashboard-style interfaces, admin/content-management flows, database-backed functionality, landing-page sections, and deployment-ready project pages.
- Worked on digital products including tutoring platforms, social-media-style web applications, portfolio websites, research/product websites, mobile app concepts, and product landing pages.
- Managed projects from concept, requirements gathering, UX planning, interface design, development, testing, deployment, and client-facing communication.

**Content Writer** Apr. 2019 – Jun. 2020

*Private Client* *Remote*

- Wrote, edited, and optimized articles, web content, blog posts, product descriptions, and marketing copy for digital platforms with a focus on clarity, search visibility, and audience engagement.
- Conducted keyword research, competitor/content analysis, topic research, and content planning to create SEO-friendly outlines, headings, metadata, and structured web copy.
- Applied on-page SEO practices including keyword placement, title optimization, meta descriptions, internal-linking suggestions, readability improvement, and content formatting for better discoverability.
- Produced content across technical, educational, business, software, and general-interest topics while adapting tone, structure, and terminology for different audiences and client requirements.
- Revised drafts for grammar, technical accuracy, readability, search intent, keyword relevance, and publication quality while incorporating client/editor feedback under deadlines.

## Professional Development

**Participant, AI Career Accelerator Program** Mar. 2026 – Present

*Alberta Machine Intelligence Institute (Amii)* *Edmonton, Canada*

- Participating in an AI-focused career development program involving industry engagement, applied AI career preparation, networking, and professional development for machine learning and data-driven roles.
- Strengthening industry readiness across applied machine learning, data science, AI product development, technical communication, and employer-facing project presentation.

## Projects

**AR-CAD: Augmented-Reality Computer-Aided Design** Jan. 2024 – Apr. 2026

- Developed an immersive CAD workflow for early-stage concept modeling, spatial validation, and export in mixed reality using Unity, Meta Quest 3, and the Meta XR stack.
- Implemented interaction workflows for primitive creation, object manipulation, scene composition, free-form modeling support, and STL export to support downstream design workflows.
- Used the system as the foundation for comparative usability, workload, think-aloud, and EEG-aligned research studies involving novice and experienced users.
- Positioned the project as both a research platform and translational product concept for broader CAD accessibility and design education; supported University of Alberta Report of Invention approval.

**Bloom-Coded Think-Aloud Transcript Analysis for Design Cognition** Jan. 2026 – Apr. 2026

- Developed a pipeline for analyzing time-aligned think-aloud transcripts from a comparative AR-CAD and traditional CAD study to characterize how interaction modality shapes expressed design cognition.
- Processed participant verbal protocols using Whisper ASR, transcript alignment, time-bin segmentation, verb extraction, Bloom-domain classification, and normalized-progress mapping across task sessions.
- Generated participant-level and group-level cognitive-process trajectories across Bloom domains, including Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation.
- Analyzed differences between AR-CAD and traditional CAD using bin-wise activity, domain shares, Wilcoxon signed-rank tests, Holm correction, Spearman correlations, and triangulation with SUS, NASA-TLX, completion, and interview evidence.
- Produced visual analytics including per-bin cognitive activity plots, participant-level micro-histograms, normalized progress trajectories, and summary exports for thesis figures and manuscript preparation.

**Bloom Taxonomy Extension using Machine Learning** May 2025 – Dec. 2025

- Built a multi-stage pipeline for extending Bloom-domain verb lists using NLP, sentence embeddings, supervised classification, score calibration, and threshold-based acceptance.
- Developed workflows for candidate verb extraction, WordNet-based filtering, one-vs-rest classification, calibration, and large-scale labeling of new verbs.
- Applied the resulting model to research workflows for automated coding of think-aloud verbalizations in design studies.
- Created the extended Bloom verb resource used as the classification backbone for later think-aloud transcript analysis in design-cognition research.

**EEG-Based Comparative Study of Cognitive Load in CAD** May 2025 – Apr. 2026

- Designed a multimodal evaluation workflow comparing AR-CAD and a traditional CAD tool using EEG, behavioral markers, synchronized task segmentation, and baseline recordings.
- Established pilot feasibility for event marking, preprocessing, baseline normalization, and bandpower-based analysis across task conditions.
- Structured the workflow to support future alignment of EEG segments with Bloom-coded think-aloud activity and CAD operations.

**Generating Consistent Game Sprites from Multi-Style Dataset** Sep. 2024 – Dec. 2024

- Co-authored a study on automating pixel-art sprite generation by combining Pokémon and Tiny Hero datasets to address data scarcity in style-specific generative models.
- Implemented and fine-tuned a diffusion model with a residual U-Net architecture for multi-style sprite generation, achieving the best FID scores across both styles.
- Evaluated GM-VAE, $\beta$-VAE, and diffusion models using t-SNE, latent-space interpolation, reconstruction metrics (MSE/SSIM), and generation quality (FID).

**Machine Learning for Scoliosis Curve Prediction** Jan. 2024 – Apr. 2024

- Built a machine learning pipeline to predict scoliosis curve progression (classification) and Cobb angle (regression) from clinical and radiographic features.
- Performed data preprocessing, feature engineering, label encoding, and exploratory data analysis on a clinical scoliosis dataset of 211 patient records.
- Compared 10 classification models and 10 regression models; Logistic Regression, Random Forest Classifier, and Decision Tree achieved up to 100% accuracy for progression prediction, while AdaBoost and Random Forest Regressors best predicted the Cobb angle.

**Ergonomic Enhancement of a Manufacturing Workplace** Jan. 2024 – Apr. 2024

- Conducted ergonomic assessment of workstations at Qualitest Canada, a welding engineering facility, to identify musculoskeletal disorder risks in tasks involving pushing, pulling, lifting, grinding, and cutting.
- Collected posture data using video recording and OpenPose-based joint coordinate extraction, then applied Rapid Entire Body Assessment (REBA) to calculate risk scores.
- Identified high-risk tasks and proposed targeted ergonomic interventions to reduce injury risk and improve worker safety and productivity.

**SageWatch: Assistive Smartwatch for the Elderly** Jan. 2024 – Apr. 2024

- Designed an assistive smartwatch system for elderly health monitoring with vitals tracking, fall detection, BLE-based location tracking, and emergency calling.
- Specified hardware architecture including sensor selection, BLE SoC (BlueNRG-132), NFC wireless charging, power management, and a TFT display, with a total BOM cost of $64.23.
- Designed the software stack using FreeRTOS, LVGL for the UI, MQTT for cloud communication, and AES-128 encryption, with estimated battery life of approximately 3.7 days on a 700 mAh cell.
- Created UI mockups for the watch face, elderly companion app, and caretaker monitoring app.

**Applied Machine Learning and Data Science** Jan. 2024 – Apr. 2024

- Completed applied ML projects spanning data processing, classical ML, ML pipelines, temporal forecasting, computer vision, large language models, and retrieval-augmented generation.
- **Data Processing and Visualization:** Cleaned, explored, and visualized Edmonton property tax assessment data using pandas, handling missing values, feature distributions, and geospatial patterns.
- **Classical ML:** Trained and evaluated decision trees, random forests, KNN, logistic regression, and naive Bayes classifiers on cardiovascular disease and other datasets, including hyperparameter tuning and cross-validation.
- **ML Pipelines:** Built end-to-end scikit-learn pipelines with feature engineering, scaling, encoding, and model comparison for property value prediction.
- **Air Quality Prediction in Beijing:** Built temporal forecasting workflows for air-quality prediction using Python, pandas, feature engineering, and sequence-modeling approaches such as LSTM, BiLSTM, and GRU.
- **Computer Vision:** Developed image classification and object detection workflows using CNNs, including training on Fashion-MNIST, custom datasets, and video-based detection tasks.
- **LLMs and RAG:** Fine-tuned BERT for sentiment analysis on IMDB reviews and built a Retrieval-Augmented Generation pipeline integrating document retrieval with transformer-based language models.
- **Markov-Chain Procedural Content Generation:** Implemented a Markov-chain-based procedural content generation workflow for game-level modeling, connecting ML for procedural content generation with applied generative systems.

**Ehsaas: Mental Health of Pregnant Women in Pakistan** Feb. 2023 – May 2023

- Investigated mental health challenges among pregnant women in Pakistan, including postpartum depression and the perceived role of mental health and pregnancy-related applications.
- Conducted semi-structured interviews and surveys, reviewed literature on mental-health approaches in the UK and India, and analyzed qualitative data using Atlas.ti and affinity mapping.
- Designed a complete Figma prototype informed by user research and an audit of existing pregnancy and mental-health applications.

**RehabVR: Virtual Reality for Rehabilitation** Feb. 2023 – May 2023

- Designed and developed a VR rehabilitation concept in collaboration with the Pakistan Society for the Rehabilitation of the Disabled to support cognition and exercise-oriented recovery activities for neurological disorders such as stroke.
- Visited hospitals and engaged with patients and medical professionals to identify rehabilitation pain points, practical constraints, and interaction needs.
- Designed research-informed interfaces and activity flows in Unity for virtual rehabilitation environments intended to facilitate exercise performance in calming settings.

**Meditare: Virtual Reality for Well-Being** Jun. 2022 – May 2023

- Designed and developed VR environments for mental well-being and breathing-based relaxation, informed by prior user research, contextual inquiry, and literature on calming experiences.
- Implemented immersive environments in Unity and SteamVR, including interactive elements, environmental effects, reflections, shadows, materials, shaders, and 3D environment details intended to support a peaceful experience.
- Conducted pilot testing to identify user-experience issues and iterated on the environments and interaction flow based on participant feedback.

**Virtual Reality for Sexual Harassment Awareness** Feb. 2022 – May 2022

- Designed and implemented a VR awareness and training experience based on recurrent campus harassment scenarios while considering user comfort and trauma-sensitive presentation choices.
- Analyzed the problem through user research, storytelling, and narrative-therapy-oriented exploration to understand overlooked forms of harassment and the contexts in which they occur.
- Conducted evaluation using pre- and post-questionnaires, user testing, and comparative testing between 2D and 3D versions to examine differences in perceived impact.

**AssistTH: Telehealth Mobile Application** Sep. 2021 – Feb. 2022

- Conducted contextual inquiry, interviews, and surveys in healthcare settings to design a telehealth mobile application connecting patients and physicians while considering constraints in access and resource availability.
- Developed sketches, scenarios, storyboards, and low-, medium-, and high-fidelity prototypes based on user needs and feasibility considerations.
- Refined the solution through low-fidelity testing, iterative redesign, pilot testing, usability testing, and high-fidelity prototyping in Figma.

**Samsara: A Fight To Survive Game** Oct. 2022 – Present

- Developed a Unity-based 3D single-player game in which the player collects coins and health points, defeats enemies, and progresses through the environment.
- Worked on asset creation in Blender, environment setup in Unity, gameplay scripting, and early exploration of a VR version for a more immersive experience.

**Language Detection Classifier** Dec. 2021 – Feb. 2022

- Built a language detection classifier using machine learning methods and a dataset of more than 700 recordings spanning English, Urdu, Spanish, Punjabi, and other languages.
- Tested logistic regression, KNN, decision trees, and random forests, achieving roughly 70% overall accuracy and about 90% for English and Urdu.

**Full-Stack Web Applications** 2021 – 2023

- **Insta-clone:** Designed a web-based Instagram clone as a full-stack project with follow requests, posting workflows, and admin-level content management backed by SQL.
- **choka.com:** Designed, developed, tested, and deployed a tutoring platform connecting students, tutors, and administrators using a user-centered design process, surveys, Figma prototypes, SQL-backed workflows, and Selenium-based automated testing.
- **Forest Health Calculator:** Collaborated with NCRA and WWF on a forest health assessment project using tree imagery and computer-vision-oriented workflows; redesigned the mobile app experience for field users such as forest rangers.

**Systems and Networking Projects** 2020 – 2022

- **Chat Application:** Built a socket-based reliable chat application enabling multi-client communication and file-sharing support over UDP-inspired reliability mechanisms.
- **Link-State Routing:** Implemented and tested a link-state routing algorithm for correct packet forwarding across a simulated network.
- **Distance-Vector Routing:** Implemented and tested a distance-vector routing algorithm for distributed route updates and packet forwarding across a network.
- **Fault Tolerant Server:** Built a fault-tolerant server using a distributed hash table for load distribution with service continuity during server failures.
- **Environment Control System:** Designed a digital system for household environment management using sensors, logic gates, and digital circuit design in Proteus.

**Embedded Systems: Line Following Robot** Sep. 2019 – Jan. 2020

- Designed a line-following robot with IR sensors for collision avoidance and Bluetooth-based mobile control for manual interaction.

## Technical Skills

**Programming and Software Engineering:** Python, C#, C/C++, Java, JavaScript, TypeScript, SQL, Bash, object-oriented programming, data structures, algorithms, debugging, software testing, Git, GitHub, GitKraken, Visual Studio, VS Code

**Web, Full-Stack, and Deployment:** HTML5, CSS3, React, Node.js, Express.js, REST APIs, MERN stack, Ruby on Rails, MongoDB, Firebase, MySQL, PostgreSQL, Netlify, Heroku, WordPress, responsive design, web forms, portfolio websites, Selenium

**AI, Machine Learning, NLP, and Data Science:** Scikit-learn, PyTorch, YOLOv8, OpenCV, Pandas, NumPy, SciPy, Statsmodels, Matplotlib, Jupyter Notebook, MATLAB, spaCy, NLTK, sentence-transformers, Whisper ASR, BERT, RAG, classification, regression, clustering, time-series forecasting, model evaluation, feature engineering, data visualization

**XR, Game Development, CAD, and Computer Graphics:** Unity, C#, Meta Quest 3, Meta XR SDK, SteamVR, AR/VR interaction design, 3D interaction, raycasting, shaders/materials, lighting, reflections, spatial modeling, primitive modeling, STL export, Blender, procedural content generation, game mechanics, mixed-reality prototyping

**UX, Product Design, and Research Methods:** Figma, Adobe XD, Adobe Photoshop, Mural, user research, usability testing, interviews, surveys, contextual inquiry, affinity mapping, thematic analysis, think-aloud protocols, SUS, NASA-TLX, Atlas.ti, wireframing, prototyping, user flows, product documentation

**Signal Processing, EEG, Embedded Systems, and IoT:** EEG workflow design, Emotiv hardware, spectral bandpower, baseline normalization, ROI analysis, event markers, sensor data processing, BLE, MQTT, FreeRTOS, LVGL, Proteus, Arduino-style prototyping, digital logic, wearable/IoT system design

**Writing, Communication, and Commercialization:** Technical writing, content writing, SEO-oriented writing, website copy, project documentation, research communication, grant/proposal writing, customer discovery, market validation, product positioning, pitch development, stakeholder communication

**Languages:** English, Urdu, Punjabi, Hindi, French

## Leadership, Service, and Community Involvement

**Technical Committee Chair,** PAMM Conference, University of Alberta — Jul. 2025 – Aug. 2025
**realme Pakistan Campus Ambassador** for LUMS — Mar. 2021 – May 2023
**Assistant Director Marketing,** INDEX – Design & Innovation Society, LUMS — Sep. 2022 – Apr. 2023
**Director Marketing & Event Head,** LUMS Students Mathematics Society — Dec. 2020 – May 2022
**Assistant Director Events,** LUMS Religious Society (LRS) — Sep. 2020 – May 2022
**Director Events,** Your Buddy Community (YBC) — Sep. 2020 – May 2021
**Coach,** Summer Coaching Session, National Outreach Program (NOP), LUMS — Jul. 2022 – Aug. 2022
**School Head,** Project Bunyaad, LUMS Community Service Society (LCSS) — Aug. 2021 – Sep. 2021
**Event Head,** LUMS Literary Society (LLS) — Dec. 2019 – Feb. 2020
**Volunteer:** LUMS Open Day (Dec. 2020), LUMS Career Fair (Mar. 2020), SIGMA IV by LSMS (Jan. 2020)

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