

VISHAL SHENDRE

Human-AI Researcher | XR/VR Researcher
Brooklyn, New York, 11220 (Open for relocation)

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SUMMARY

Human-centered design researcher with a focus on **interaction design**, autonomous systems, and **extended reality**. My work explores how **cognitive ergonomics** and usability shape trust and performance in **AI-driven** environments. Through **user research**, design, system understanding, **prototyping**, and **iterative testing**, I aim to design intuitive interfaces that enhance **human-AI collaboration** particularly in mobility, **automation**, and decision-support systems.

Research Interest:

Human-AI Interaction · Interaction Design · Extended Reality (AR/VR) · Design Systems · Agile Development · Cognitive Ergonomics · Design for Trust · Multi-Agent Systems · Autonomous Systems · Human-Centered Computing

ACADEMIC DETAILS

Touro University, New York City, NY, USA

Master of Arts in **Human Interaction & User Experience Design**

GPA: 3.88 / 4.0 | Aug 2022 – Jun 2024

During my **Master's**, I focused on the **intersection of Human-Computer Interaction (HCI)**, **cognitive psychology**, and **design for emerging technologies**. Developed a strong foundation in user research, interaction design, accessibility, and **system usability**, with emphasis on designing for intelligent and **autonomous systems**.

Key coursework included:

- Usability and Accessibility in Interactive Systems
- Design Research Methods
- Interaction Design for Emerging Platforms (AR/VR)
- Information Architecture and Systems Thinking
- Fundamentals and Principles of User Experience Design

Thesis Research: “Spatial AR Navigation for Retail: Designing for Accessibility and Cognitive Efficiency”

Researched and evaluated an AR-based wayfinding system for large-format retail spaces (e.g., Target stores), focusing on spatial cognition, accessibility, and cognitive load reduction in unfamiliar environments.

- Conducted spatial mapping and behavior tracking to evaluate perceptual load and interaction performance.
- Applied human-centered design methods, including scenario-based task modeling, card sorting, and usability testing (n=30+ participants).
- Findings contributed to design principles for XR-based navigation and trust in location-aware systems.
- Quantitatively assessed improvements in task completion time, error rates, and user confidence using NASA (TLX) and behavioral metrics.
- **Tools Used:** Unity3D, Figma, Lottie, Python (task logging), NVivo (qual analysis), heuristic evaluation, NASA TLX, card sorting, A/B testing

Institute of Aeronautical Engineering, Hyderabad, India

Bachelor of Technology in **Electrical & Electronics Engineering**

Minoring in **Computer Engineering**

GPA: 3.00 / 4.0 | Jun 2017 – Aug 2021

During my **undergraduate program** combining core **electrical engineering** with **embedded systems** and **control automation**. Gained early **technical fluency in circuit design**, **microcontroller programming**, and **sensor-based systems**, which served as a foundation for later work in **interactive systems** and **smart interfaces**.

Academic Focus Areas:

- Hybrid Electric Vehicles
- Industrial Automation & Control
- Microcontrollers, Embedded Systems and Digital Signal Processing
- Data Structures, Computer Programming, and Simulation Labs

Capstone Project: IoT-Based Smart Home Automation Using Sensor Networks

Engineered and implemented a functional smart home system integrating Arduino-based sensors, programmable relays, and automated control mechanisms for lighting, irrigation, blinds, and temperature. Awarded 2nd place at the institutional innovation expo for practical relevance, usability, and cost-effective energy management.

- Built and prototyped a **sensor-driven home automation prototype** integrating Arduino Uno, relays, and ambient data for automation of lights, blinds, temperature, and irrigation.
- Demonstrated real-time responsiveness and customizability using **mobile commands** and **manual overrides**.
- Sparked interest in **human-centric automation**, leading to transition into HCI and product design research.

- Project received 2nd Place at the campus-wide **Innovation & Technology Expo**, recognized for practicality, energy-efficiency, and user-oriented design.

RESEARCH EXPERIENCE

Opentext - UX Researcher (Product Team)

Human Factors & Usability Research in Enterprise AI Systems | May 2021 – Jan 2022

Led usability and interaction research for AI-driven document processing platforms within enterprise workflows. Focused on visual hierarchy, user comprehension, and compliance-readiness in data-intensive environments.

- Designed and executed usability testing protocols across 3 regulatory applications, focusing on speed, accuracy, and comprehension.
- Delivered WCAG 2.0-compliant UI specifications for critical finance and compliance modules, aligning design with accessibility and legal standards.
- Collaborated with ML engineers to improve data parsing logic, leading to an 18% increase in validation accuracy during QA cycles.
- Applied research on document cognition, annotation fatigue, and visual clarity in knowledge-dense systems.
- **Tools & methods:** Figma, Axure RP, Jira, Postman, HTML/CSS (design testing), WCAG compliance, heuristic evaluation, cognitive walkthrough's, QA test frameworks, A/B testing

WallMag.io - UX Design Research Intern

Interaction Design & Cognitive Load Analysis for Creator Interfaces | Jan 2021 – May 2022

Researched interaction flow and mental effort in early-stage creator tools for a digital publishing platform.

- Developed a modular design system and restructured flows to reduce decision fatigue.
- Ran usability tests, heuristic audits, and card sorting to improve content discoverability.
- Improved retention by 9% and streamlined task success across multiple user types.
- Applied cognitive load theory to optimize UI density, user feedback mechanisms, and on-screen prioritization.
- **Tools & methods:** Adobe XD, Figma, Balsamiq, Notion, Google Forms (user testing), card sorting, heuristic evaluation, think-aloud protocol, Lean UX workshops, Jira Confluence, Zeplin, Anima App

RESEARCH-ALIGNED SKILLS

- **HCI & Cognitive UX:** User-Centered Design · Human Factors · Usability Testing · Cognitive Load Analysis · Scenario-Based Design · Heuristic Evaluation · Accessibility (WCAG 2.0/2.1) · Mixed-Methods Research · Task Modeling · Card Sorting · Think-Aloud Protocols · NASA-TLX · A/B Testing
- **XR/VR & Spatial Prototyping:** Unity (AR/VR) · Lottie · Figma Prototyping · RIVE · Framer · Adobe XD · Play · Webflow · XR Interface Prototyping · Motion Design for Interaction · Spatial Mapping
- **Technical Prototyping & Product Engineering:** HTML · CSS · JavaScript (basic) · React (basic) · Git (read-only) · Webhooks · REST APIs · Postman (API Testing) · Firebase (PM-level usage) · Arduino · Vercel V0 (Live product testing)
- **Product & Workflow Tools:** Jira · Confluence · Notion · Trello · ClickUp · Asana · Linear · GitHub (Product workflows) · Miro · FigJam · Slack · Zeplin · Anima App
- **Project & Delivery Methodologies:** Agile · Scrum · Kanban · Lean UX · Design Ops · OKRs · KPIs · Backlog Grooming · Roadmapping · Market & Competitor Analysis · Product Lifecycle Management
- **Data & Research Analysis Tools:** Python (task analysis, behavioral data logging) · NVivo (qualitative coding) · Excel/Sheets (quant analysis, interaction metrics) · Google Forms (user testing) · UsabilityHub · Maze (optional if used)

PROFESSIONAL EXPERIENCE

Sr. Visual Designer (Marketing Team)

Jul 2024 – Jul 2025

Touro University - Manhattan, New York

Led visual design and creative strategy for university-wide branding, admissions, and digital experiences across the Manhattan Tech Campus and Business School.

- Directed a multi-channel rebranding initiative, aligning digital and physical assets - resulting in a 45% increase in brand recognition among prospective students.
- Shaped the UX and content strategy for the graduate admissions journey, including landing pages, lead-generation tools, and achieving a 28% boost in application conversions.
- Designed digital narratives for executive education programs, incorporating interactive content, motion graphics, and user testimonials - growing qualified leads by 3× in one quarter.
- Created a cross-departmental design system, improving accessibility, hierarchy, and consistency significantly accelerating design velocity.
- Collaborated with academic leadership to launch a personalized microsites framework using user segmentation to improve engagement and reduce bounce rates by 35%.

Graduate Designer Assistant

Sep 2022 – Jun 2024

Touro University - Manhattan, New York

Hired as a design assistant to lead university marketing campaigns and **product UI initiatives across student-facing platforms** and also **teaching undergrad students in UX principles** and introduction to **responsive web design** and development classes.

- Launched integrated campaigns across **Times Square, Amtrak, and NYC transit**, increasing interested applications by 25% and **generating 750+ new leads** in one semester.
- **Co-designed an internal course platform** using card sorting and usability testing, achieving a 15% boost in content discoverability and a 17% reduction in navigation friction.
- Built and maintained a 30-component UI library, streamlining digital consistency across multiple departments.
- **Mentored 10+ students** in UX principles, **Figma workflows**, and **prototyping via guided lab sessions** and design critique.

UX Design (Marketing Team) - Internship

May 2023 – Jul 2023

Touro University - Manhattan, New York

Worked with the founding team to define the platform's MVP and scale interaction design for early user traction.

- Restructured course architecture through card sorting and usability audits, **improving platform retention and content discoverability**.
- Built a suite of modular UI components aligned with brand guidelines, helping scale design efforts across multiple products and reducing **visual inconsistencies by 30%**.
- Audited core interaction flows and **reusable layout** patterns to streamline navigation, **yielding 17% reduction** in user friction and stronger design alignment across institutional touch points.

COMMUNITY VOLUNTEERING

Student Service Excellence Award Recipient

Touro University - Graduate School of Technology (Jul 2024)

Recognized for leadership and service in mentoring international graduate students through academic integration programs, peer-led support, and study abroad orientation initiatives.

Guest Speaker and Volunteer Mentor

SUNY Oneonta - UX/UI Design Course (August 29, 2024)

Delivered an interactive workshop to 20+ undergraduate design students, covering topics such as design systems, UX flow mapping, portfolio strategy, and critique for early-career designers.

Teaching Assistant and UX Design Mentor

Touro University - Undergraduate Program (2022–2024)

Mentored 10+ undergraduate students in fundamental visual design, UX principles, introduction to Figma and design systems, responsive web design and development techniques in interactive design courses.

ADDITIONAL INFORMATION

- **Language Proficiency:** Fluent in English – **CEFR Level C1**
- **Open to relocation for international, full-time doctoral research opportunities**
- **Portfolio:** vishalshendre.com