

NUMAN GHUMAN

Quantitative UX Research Analyst · Mixed-Methods Research · AI Evaluation · Learning Experience Design

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PROFESSIONAL SUMMARY

Quantitative UX researcher with 5+ years designing and executing mixed-methods studies — from survey instrumentation and SONA-based participant management to inferential statistical analysis (SPSS, R, SQL) and stakeholder reporting — for consumer products and university behavioral research. Served on the IRB and administered controlled experiments; benchmarked two live consumer applications achieving **SUS 87/100** and a **73% session error-rate reduction**. Specialized in AI workflow evaluation and learning-experience design; M.Ed. 4.0 GPA · Columbia University graduate training in psychological research methods.

CORE COMPETENCIES

Quantitative UX Research

Survey Instrumentation

SPSS & R

SQL / PostgreSQL

ANOVA & Regression

SUS / NPS / UEQ

SONA Systems

Qualtrics & Google Forms

IRB Protocol Review

Experimental Design

AI Workflow Evaluation

Prompt Engineering

Learning Experience Design

Dashboard Design

React / TypeScript

Heuristic Evaluation

Mixed-Methods

Behavioral Science

TECHNICAL SKILLS

Statistical Analysis	SPSS · R · SQL (PostgreSQL) · ANOVA · Independent & Paired t-tests · Multiple Regression · Pearson Correlation · Hypothesis Testing · Effect Sizes (Cohen's d) · SUS / NPS Scoring
Survey & Research	Qualtrics · Google Forms · SONA Systems · IRB protocol review · Survey instrument design · Questionnaire programming · Usability benchmarking (SUS, UEQ) · Heuristic evaluation · Think-aloud protocols
Research Methods	Quantitative survey research · Experimental design · Usability testing · Behavioral studies · Mixed-methods · Confound control · Needs assessment · Competitive analysis
Data & Dashboards	Excel (advanced) · SQL querying · Dashboard design · Behavioral data integration · Data validation & quality control · Tracking study management
AI & Platforms	Claude · ChatGPT · Gemini · Microsoft Copilot · Prompt engineering · AI workflow evaluation · Structured model benchmarking
Development	JavaScript (ES6+) · TypeScript · React.js · HTML5 · CSS3 · Git/GitHub · Supabase
Languages	Urdu/Hindi (conversational) · Arabic (basic) · Tajik (limited working)

PROFESSIONAL EXPERIENCE

L&D Research Lead — Learning Experience & Organizational Effectiveness

September 2023 – Present

NYC Department of Education · Brooklyn, NY

- Designed and executed mixed-methods research studies evaluating technology adoption, user behavior, and learning-experience quality; managed participant samples of **100–150+ per cycle** from instrument design through statistical analysis and stakeholder reporting.
- Benchmarked AI-assisted workflows (ChatGPT, Claude, Copilot) using structured usability-testing protocols and quantitative adoption metrics; synthesized findings into recommendations that **improved workflow efficiency by 21%**.
- Built Excel dashboards and SQL-supported reporting systems tracking engagement, attendance, and effectiveness across **100+ participant records**; maintained longitudinal tracking studies to surface behavioral trends over time.
- Translated qualitative and quantitative findings into stakeholder-facing reports and presentations, connecting behavioral data directly to actionable program and product decisions.
- Facilitated **20–40 virtual and hybrid sessions per semester**; continuously iterated on participant experience using post-session evaluation data and structured feedback loops.

Independent UX Researcher & Product Developer

August 2018 – Present

Independent · Brooklyn, NY

- Designed and administered a **UX engagement benchmark (N=52)** for Deen Detectives; programmed and fielded survey instruments; ran independent-samples t-tests (iOS vs. Android: **$t(48.5)=2.69$, $p=0.010$, $d=0.75$**) and multiple regression ($R^2=0.08$) in SPSS and R; achieved **SUS 87/100** through iterative testing with 20 users.
- Conducted a **financial UX benchmark (N=30)** for Mizan Companion across three literacy segments; one-way ANOVA [**$F(2,27)=34.7$**] and paired t-test [**$t(29)=14.1$**] confirmed significant usability gains post-onboarding (+13 SUS points); segmented redesign reduced session error rates by **73%**.
- Identified strong correlations between financial literacy and usability (**$r=0.91$**) and task completion (**$r=0.77$**); findings directly informed a segmented onboarding flow that raised task-completion rates from 62% to 86%.
- Evaluated Claude, ChatGPT, and Gemini using structured testing protocols comparing usability, reliability, and performance; synthesized findings into reports that informed AI-integration decisions and prompt-engineering workflows.
- Conducted competitive analysis of Duolingo, Kahoot, and Khan Academy to prioritize feature development; questionnaire-driven insights contributed to a **14% increase in user engagement**.
- Built and shipped two production applications — **Deen Detectives** (live on App Store) and **Mizan Companion** — using React, TypeScript, SQL, and Supabase, managing the full product lifecycle from research through release.

Behavioral Research Assistant & IRB Member — Moral Psychology Lab

January 2018 – August 2021

Brooklyn College, Psychology Department · Brooklyn, NY

- Served on the **Institutional Review Board (IRB)**, reviewing research protocols for ethical compliance, participant safety, and methodological soundness across all active studies.
- Administered between-subjects experiments comparing Moral Foundations Theory (MFT) vs. Dyadic Template across **5 moral domain pairs**; managed the full participant lifecycle from **SONA Systems** recruitment through structured debriefing — screened participants, assigned study credits, and maintained enrollment records across multiple concurrent studies.
- Maintained strict protocol fidelity across multi-semester data collection to control for experimenter and participant confounds; performed statistical analyses in SPSS and R: ANOVA, t-tests, Pearson correlation, regression, and hypothesis testing.
- Managed data entry, validation, and quality control for experimental datasets; applied understanding of statistical power requirements to inform participant recruitment targets for publication-ready samples.
- Synthesized peer-reviewed literature (Haidt, Koller, Dias) to evaluate competing theoretical frameworks; communicated findings and analytical interpretations directly to faculty researchers.

Program Coordinator — Career Readiness & Transitions

April 2020 – August 2020

NYC Department of Education · Brooklyn, NY

- › Managed a caseload of **200+ participants**; conducted structured needs assessments and collected survey data to identify behavioral barriers and improve program outcomes.
- › Built tracking reports synthesizing outcome and engagement data into stakeholder recommendations; designed and facilitated virtual workshops directly informed by assessment findings.

RESEARCH PROJECTS**Deen Detectives — UX Engagement & Retention Study**

2024 – Present

Pilot usability study · N=52 · Methods: survey instrumentation, independent t-test, regression, SUS scoring

- › Designed and fielded survey instruments measuring session engagement, feature adoption, and 30-day retention; coded open-ended responses into thematic categories and built a tracking dashboard for ongoing behavioral monitoring.
- › iOS vs. Android comparison: **t(48.5)=2.69, p=0.010, Cohen's d=0.75**; regression modeled session-engagement predictors ($R^2=0.08$); **SUS=87/100** achieved through iterative testing cycles.

Mizan Companion — Financial UX Benchmark Study

2024 – Present

Benchmark usability study · N=30 · Methods: one-way ANOVA, paired t-test, Pearson correlation, SUS scoring

- › Benchmarked usability across three financial-literacy segments; measured task completion, error rate, time-on-task, and SUS to identify critical design gaps and prioritize redesign effort.
- › ANOVA [**F(2,27)=34.7**] confirmed cross-segment differences; post-onboarding redesign yielded **+13-point SUS gain [t(29)=14.1]**; financial literacy correlated with task success (**r=0.77**) and perceived usability (**r=0.91**).

EDUCATION**Master of Education**

September 2022 – December 2024

Brooklyn College · GPA: 4.0

Graduate Studies — Counseling Psychology (24 Credits)

July 2021 – July 2022

Teachers College, Columbia University · GPA: 4.0

Coursework: psychological research methods, human development, behavioral science

Bachelor of Science — Psychology

August 2017 – May 2021

Macaulay Honors College at Brooklyn College · GPA: 3.83 · Magna Cum Laude

Dean's List Spring 2018 – Present