

Shadi Nourriz

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EDUCATION

Colorado School of Mines

PH.D. IN COMPUTER SCIENCE

Golden, CO

May 2028

- **Course Instructor:** Introduction to Machine Learning (CSCI 470/570, undergraduate and graduate), Fall 2026

M.S., COMPUTER SCIENCE | GPA 3.8/4.0

Dec 2025

- Relevant Coursework: **Social & Collaborative Computing, Human-AI Interaction, Machine Learning, LLMs**

University of Guilan

BACHELOR OF SCIENCE IN COMPUTER SOFTWARE

Guilan, Iran

Aug 2018

- GPA: **3.11/4.0** | Last two years GPA: **3.54/4.0**
- Relevant Coursework: Algorithms, Artificial Intelligence, Principles of Computational Intelligence
- Thesis: Social Media Sentiment Analysis. Researched and performed sentiment analysis of tweets using Logistic Regression and a sample dataset from NLTK that is separated into positive and negative tweets, achieving an accuracy of 99%.

RESEARCH EXPERIENCE

Colorado School of Mines

2023–Present

RESEARCH ASSISTANT

Computational Social Science of Digital Health and Supportive Interactions in Online Communities

Project Lead

- Built a dataset of **23,302 Reddit threads** and approximately **194,200 comments**, integrating archived data and reconstructing conversation structures to examine peer support, user re-engagement, and meaning-making in **mental health** and spirituality communities, such as r/SuicideWatch, r/depression, r/lonely, and r/ptsd.
- Operationalized original poster re-engagement through reply relationships, temporal sequences, and eligibility windows; preparing LIWC, empathy-based features, and **mixed-effects regression models** to examine how community responses relate to continued engagement.
- Designed a **theory-informed codebook** to examine how individuals interpret, reconsider, and reconstruct meaning across original posts and subsequent contributions.
- Developed **human annotation protocols** on how people reinterpret hard experiences; setting up **inter-rater reliability** checks.
- Designing an **NLP classification pipeline** using TF-IDF/logistic regression baselines and **BERT-based classifiers** to scale human annotations and identify meaning-making processes across Reddit narratives.

Expanding Models of Delivery for Online Spiritual Care and Peer Support

- **Led co-design workshops** (in-person and online) with spiritual care professionals (n=24) to explore how online community technologies can be designed to better support spiritual care, focusing on governance structures (norms, rules, moderation) and UX features.
- Proposed “Light a Candle,” a new feature for **CaringBridge (a nonprofit health platform)** that lets loved ones express support without words; collaborated with its product and design teams for six months to refine Figma prototypes; **now in development**.
- Conducted **semi-structured interviews** with spiritual care professionals to explore their perspectives on Online Spiritual Care Communities (OSCCs) and their roles within them.
- Transcribed and validated interview recordings, ensuring high-quality datasets for analysis.
- Performed **qualitative analysis** using the **Grounded Theory Method (GTM)**, including open coding and iterative data refinement to uncover emergent themes.
- Utilized **affinity mapping** in Miro to organize and synthesize codes into **axial categories**, identifying patterns in chaplaincy behaviors.
- Applied **Reflexive Thematic Analysis** to workshop transcripts to identify key themes and subthemes, translating qualitative insights into **socio-technical** design recommendations for online community platforms.

Data-Driven Research: Quantitative Methods

- Co-developed research questions, hypotheses, and QuestionPro branching logic for **GenAI@Mines** (2026), a multi-wave survey of student and faculty AI use; contributed to its OSF-preregistered regression plan.
- Independently coded 20% of 2,668 expert comments as one of three coders (**Krippendorff's $\alpha = .792$**) in a two-round Delphi study (JMIR 2026); experts saw AI as more capable of administrative tasks (95%) than of patient engagement (42%).

Community-Centered Reddit Bot Design

Project Lead

- Directed the design and deployment of a bot, applying a community-centered approach to address the r/compSocial subreddit's needs through iterative design, implementation, and evaluation.
- Conducted **contextual inquiries**, designed a **user survey** (N = 13), and facilitated two rounds of **user testing sessions** (N = 10) to gather insights from subreddit moderators and users, ensuring that bot features aligned with real-world community needs and preferences.
- Developed and refined a keyword subscription and clustering system that allows users to follow trending topics and receive tailored notifications in public or private modes.
- Engaged in **auto-ethnographic observation** and continuous user feedback to iteratively enhance bot functionality, fostering meaningful engagement and topic-specific discussions among users.
- Conducted **brainstorming sessions** to discuss user-requested features, implementing an auto-suggestion feature for research papers using keyword detection to improve content relevance and support knowledge-sharing within the academic community.

Replication of Folk Models of Computer Security

- Investigated the evolution of **users' mental models and decision-making processes** regarding computer, smartphone, and IoT security threats over the past decade.
- Designed and conducted a mixed-methods study**, adapting and updating interview questions from a 2010 foundational study to reflect modern cybersecurity threats, with surveys and in-depth qualitative interviews capturing diverse user perceptions.
- Refined **recruitment strategies** using Prolific and MTurk to achieve a demographically diverse participant pool, ensuring inclusive representation across age, gender, and technical expertise.
- Applied **thematic analysis** to uncover trends in users' mental models and **decision-making processes**, highlighting changes in security perceptions over the past decade.

PUBLICATIONS

Shadi Nourriz , Lilly Phan, Jesan Ahammed Ovi, and C. Estelle Smith. <i>Digital Health and Supportive Interactions: A Computational Study of Reddit Conversations and Community Responses</i> .	<i>ACM Health Journal</i> 2027 <i>In submission</i>
Shadi Nourriz , Alemitu Bezabih, and C. Estelle Smith. <i>Professional Care Providers' Perspectives on the Design and Governance of Online Support Care Communities</i> .	<i>ACM Health Journal</i> 2027 <i>In submission</i>
Jesan Ahammed Ovi, Shadi Nourriz , Lilly Phan, Joshua Hatfield, Noah Link, and C. Estelle Smith. <i>Understanding Spiritual Narratives and Peer Support in Online Communities</i> .	<i>CHI</i> 2027 <i>In review</i>
Alemitu Bezabih, Shadi Nourriz , Anne-Marie Snider, and C. Estelle Smith. "Spiritual Care is Everyone's Job": Design Goals for Cultivating Meaningful Peer-Provisioned Spiritual Care Interactions Online.	<i>CHI</i> 2027 <i>In review</i>
Fabian Winiger, C. Estelle Smith, Shadi Nourriz , Csaba Szilagyi, and Annette Haussmann. <i>Artificial Intelligence in Spiritual Care: A Modified Delphi Study</i> . Journal of Medical Internet Research.	<i>JMIR</i> 2026
Jesan Ahammed Ovi, Alemitu Bezabih, Anne-Marie Snider, Shadi Nourriz , Daniel McKenzie, and C. Estelle Smith. <i>Toward the Development of Online Spiritual Care Communities: A Large-Scale Survey of Spiritual Care Stakeholders to Establish Initial Design Directions, Acceptability, and Feasibility</i> . Utah, October 10–14, 2026.	<i>CSCW</i> 2026 <i>Honorable Mention</i>
C. Estelle Smith, Alemitu Bezabih, Shadi Nourriz , and Jesan Ahammed Ovi. <i>SPIRIT: A Design Framework To Support Technology Interventions for Spiritual Care Within and Beyond the Clinic</i> . In Proceedings of the 2026 ACM CHI Conference, Barcelona, Spain, April 13–17, 2026.	<i>CHI</i> 2026
Alemitu Bezabih, Anne-Marie Snider, Jesan Ahammed Ovi, Shadi Nourriz , George Handzo, and C. Estelle Smith. "Reddit Ministry": Conceptualizing Online Communities as Novel Sites for Spiritual Care Delivery. Journal of Health and Social Care Chaplaincy: Special Issue on Digital Spiritual Care, 2025.	<i>Health and Social Care Chaplaincy</i> 2026
Shadi Nourriz , Rui Zhang, and C. Estelle Smith. <i>Stay Ahead: Designing a Community-Driven, AI-Powered Bot for Predicting Academic Paper Impact and Enhancing Multi-User Engagement</i> . Poster Paper at the Collective Intelligence (CI) Conference, La Jolla, California, August 2025.	<i>CI</i> 2025 <i>Poster and Demo Track</i>
Alemitu Bezabih, Shadi Nourriz , Anne-Marie Snider, Rosalie Rauen Zahn, and C. Estelle Smith. <i>Meeting Patients Where They're At: Toward the Expansion of Professional Chaplaincy Care into Online Spiritual Care Communities</i> . In Proceedings of the 28th ACM SIGCHI Conference on Computer-Supported Cooperative Work and Social Computing (CSCW'25), Bergen, Norway, October 18–22, 2025.	<i>CSCW</i> 2025

Shadi Nourriz, Alemitu Bezabih, and C. Estelle Smith. *On the Design Risks of Empathy Fatigue*. CHI 2024 Workshop: Empathy-Centric Design: Scrutinizing Empathy Beyond the Individual, Honolulu, Hawaii, May 2024.

CHI 2024
Workshop

C. Estelle Smith, Alemitu Bezabih, and **Shadi Nourriz**. *On the Challenges of Implementing Online Spiritual Care Communities (OSCCs) in Collaboration with Diverse Healthcare Teams*. Paper for CHI 2024 Workshop: Conducting Research at the Intersection of HCI and Health: Building and Supporting Teams with Diverse Expertise to Increase Public Health Impact, Honolulu, Hawaii, May 2024.

CHI 2024
Workshop

C. Estelle Smith, Alemitu Bezabih, **Shadi Nourriz**, Bo Wu, and Gabe Fierro. *Toward LLM-Powered Robots in Engineering Education*. Paper for HRI 2024 Workshop: Human Large Language Model Interaction: The dawn of a new era or the end of it all?, Boulder, Colorado, March 2024.

HRI 2024
Workshop

Alemitu Bezabih, **Shadi Nourriz**, and C. Estelle Smith. *Toward LLM-Powered Social Robots for Supporting Sensitive Disclosures of Stigmatized Health Conditions*. Paper for HRI 2024 Workshop: Scarecrows in Oz: Large Language Models in Human-Robot Interaction, Boulder, Colorado, March 2024.

HRI 2024
Workshop

TEACHING EXPERIENCE

Instructor | Department of Computer Science

2026–Present

COLORADO SCHOOL OF MINES

- Instructor of two sessions (CSCI 470/570, undergraduate and graduate) with **30+** undergraduate and graduate students in the course: Introduction to Machine Learning

Teaching Assistant | Department of Computer Science

2025–2026

COLORADO SCHOOL OF MINES

- Held weekly office hours and graded assignments for **50+** undergraduate students in the course: Introduction to Machine Learning

Teaching Assistant | Department of Computer Engineering

2017–2018

UNIVERSITY OF GUILAN

- Graded assignments for **25+** undergraduate students in the following courses: Artificial Intelligence | Principles of Computational Intelligence | Principles of Computer Vision

Tutor | Physics and Mathematics

2013–2014

- Taught Physics and Mathematics to **30+** high school students who were preparing for the Nationwide University Entrance Exam.

HONORS AND AWARDS

Member of Sigma Xi, The Scientific Research Honor Society

2025–Present

- Inducted based on contributions to the research article “*Toward LLM-Powered Robots in Engineering Education*,” which demonstrates significant engagement in advancing scientific knowledge.

CRA-WP Grad Cohort for Women

2025

- Scholarship participant, Computing Research Association (CRA-WP) “Grad Cohort for Women” Workshop, Denver, CO (2025).

C-MAPP Scholar

2023–2024

- Awarded a highly competitive scholarship recognizing academic excellence in computing, with direct mentorship and networking opportunities through an industry-sponsored partnership at Colorado School of Mines.

Full Tuition Fee Waiver Recipient

2013

- Awarded a full tuition fee waiver for academic excellence during B.Sc. studies at the University of Guilan.
- Top 2% of 250,000 participants in the “Nationwide University Entrance Exam” in the Mathematics and Physics fields for the B.Sc. degree.

WORK EXPERIENCE

Aria Nasim Iranian Information and Communication Technology Company

2017–2021

SOFTWARE DEVELOPER AND UX/UI DESIGNER

Web-based Application for Online Food Delivery

- Designed low-fi prototypes and built responsive pages for the client side of the application.
- Designed and developed effective features based on qualitative research that improved usability, increased client engagement by **30%**, and increased customer satisfaction with the application.
- Identified and fixed **50+** bugs and technical issues before and after release.

Map-based Web Application for School Buses

- Identified innovative ideas and proofs of concept according to project requirements.
- Designed interactive prototypes, created user flows, and addressed all the needs of the client.
- Built layouts, implemented responsive web pages, and developed usability tests and heuristic evaluations.

Statistical Information System Website

- Improved website performance through redesigned pages, layouts, and the integration of customized WordPress plugins, resulting in increased engagement and exceeding implementation requirements.

VOLUNTEERING AND SERVICE

Peer Reviewer, ACM Human Factors in Computing Systems (CHI) (4 papers)—reviewed invited manuscripts and provided detailed feedback. 2026

Mentor, Department of Computer Science, Mines, Summer and Fall Undergraduate Research Fellowship (SURF and MURF) Program. 2026

Peer Reviewer, Nature Mental Health—reviewed invited manuscript(s) and provided detailed feedback. 2026

Program Committee Chair, Conference on Spirituality and Interactive Technology Design (SPIRITED '25, '26). 2025

Paper Reviewer, Conference on Spirituality and Interactive Technology Design (SPIRITED '25, '26)—reviewed 8+ submissions and provided feedback. 2025

Grant Review Assistant, Swiss National Science Foundation, during the 2025 grant cycle. 2025

Interview Panel Member, Hiring for the CS & EE Graduate Programs Manager position, Colorado School of Mines. 2025

Poster Reviewer, CSCW 2024—assessed submissions for the Poster track. 2024

Member, Scientific Association of the Computer Engineering Department, University of Guilan—organized tech talks and peer mentoring events for 100+ students. 2016–2017

Organizing Committee Member, 12th ISC Conference on Information Security and Cryptology, University of Guilan—coordinated logistics and speaker outreach for 200+ attendees. 2015

Mentor, Nationwide University Entrance Exam Preparation, GHALAMCHI Educational Center—guided 60+ high school students in STEM subjects, boosting exam success rates through tailored workshops. 2013–2015

SKILLS

Programming:

- Python – JavaScript – C# – SQL – HTML – CSS

Machine Learning & NLP:

- Scikit-learn – BERT – Natural Language Processing (NLP) – Logistic Regression – Decision Trees – Random Forests – SVM – KNN – k-Means – Statistical Modeling – Data Analysis

Frameworks & Libraries:

- TensorFlow – PyTorch – Pandas – NumPy – Matplotlib – Hugging Face – React – Node.js – WordPress

Research & Mixed-Methods Expertise:

- Design Workshops – Design Evaluation – Ethnographic Research – Contextual Inquiry – Semi-Structured Interviews – Surveys – Experimental Design – A/B Testing – Diary Studies
- Grounded Theory Method (GTM) – Reflexive Thematic & Content Analysis – Open/Axial Coding – Affinity Mapping – Heuristic Evaluation – Usability Testing – Rapid Prototyping (Paper, Wireframes, Sketching)

Tools & Platforms:

- Figma – Miro – Atlas.ti – Dovetail – Qualtrics – Overleaf – Git/GitHub – Jupyter Notebook – MongoDB

Leadership & Collaboration:

- Empathic and visionary leader with high emotional intelligence; skilled in cross-functional teamwork, interdisciplinary research, mentoring, and participatory collaboration.