

Akriti Bagale

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Mixed-methods researcher combining NLP, statistical analysis, and human-centered research design. Three years of software engineering experience plus PhD research on human-AI interaction, with peer-reviewed publications in HCI and computational social science.

EDUCATION

George Mason University, Fairfax, VA <i>PhD in Information Technology; research in human-AI interaction and computational social science</i> Coursework: Natural Language Processing, Applied Statistics in R (ANOVA, regression, factorial designs), Qualitative Research Methods	Aug 2023 - Present
Kathmandu University, Dhulikhel, Nepal <i>Bachelor of Computer Engineering</i>	Aug 2016 - Dec 2020

RESEARCH EXPERIENCE

Research Assistant, TRAILS Lab <i>George Mason University</i>	Aug 2023 - Present Fairfax, VA
• Led a mixed-methods study of public discourse on AI ethics in education using Twitter/X data (2019-2024), applying BERTopic topic modeling and SetFit sentiment classification; first-author paper published in <i>Discover Education</i> (Springer). • First-authored a PRISMA systematic literature review of 38 studies (2018-2024) on assistive technology for neurodivergent individuals; published in <i>Interacting with Computers</i> (Oxford University Press). • Built transformer-based NER pipelines (BioBERT, RoBERTa) for the SMM4H-HearD 2026 shared task on Reddit substance-use data; weighted ensemble achieved the team's best strict F1 of 0.435. • Presented research at CAPWIC 2026 (Virginia Tech), served as an ASEE panelist on generative AI in doctoral research, and peer-reviewed for SIGCSE TS 2027; co-authoring a handbook chapter on ML in engineering education.	

INDUSTRY EXPERIENCE

Software Engineer, Cedar Gate Technologies <i>HIPAA-compliant healthcare payment platform for US clients</i>	Jul 2021 - Jun 2023 Kathmandu, Nepal
• Optimized SQL stored procedures, views, and database objects in MSSQL, improving query performance by 30%. • Built responsive front-end features (JavaScript, Vue.js) on .NET microservices, reducing application response time. • Worked with AWS data services (Glue, SageMaker) supporting ETL and analytics workloads. • Authored technical design documents and presented them to product owners, translating client needs into specs.	
Junior QA Engineer, Eightsquare <i>Cross-border remittance platform</i>	Sep 2020 - Jun 2021 Kathmandu, Nepal
• Created interactive Tableau dashboards of financial metrics, cutting report generation time by 20%. • Ran statistical, data-driven test analysis verifying 99.9% transaction accuracy and identifying key KPIs.	

SELECTED PUBLICATIONS

- **Bagale, A.**, et al. Pragmatism, Anxiety, and Accountability: Public Discourse on AI Ethics in Education on Twitter/X. *Discover Education* (Springer), 2026.
- **Bagale, A.**, Machado Neto, O. J., & Motti, V. G. A Systematic Literature Review of Assistive Technology for Neurodivergent Individuals. *Interacting with Computers* (Oxford University Press), 2026. doi:10.1093/iwc/iwag038
- Kalantari, N., **Bagale, A.**, & Motti, V. G. Designing Assistive Technologies for and with Neurodivergent Users: Considerations from Research Practice. *Interacting with Computers* (Oxford University Press), 2025.

SKILLS

Research methods: Mixed methods, qualitative coding, systematic literature review, survey design, statistical analysis in R (ANOVA, regression, t-tests, correlation)

ML & NLP: Hugging Face Transformers (BERT, RoBERTa, BioBERT), BERTopic, SetFit, NER, sentiment analysis, topic modeling, scikit-learn, pandas

Programming & tools: Python, R, SQL, Java, JavaScript, AWS (Glue, SageMaker, S3), Tableau, Power BI, Git, LaTeX, Figma

Certifications: Google Foundations of UX Design, Tableau, CITI Social and Behavioral Research