

Sheikh A. Mannan

Fort Collins, CO, USA

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EDUCATION

Colorado State University

Fort Collins, CO

PhD Computer Science | CGPA 4.0/4.0

January 2021 – December 2025 (Expected)

- Advised by *Dr. Nikhil Krishnaswamy*.
- Primary Research Topics: Applied Machine Learning, Embodiment & Trust in AI, Situated Grounding.
- Relevant Courses: Intro to Machine Learning, Machine Learning, Natural Language Processing, Intro to Distributed Systems, Big Data, Software Product and Process Evaluation, AI/ML Product Management.

Lahore University of Management Sciences

Lahore, Pakistan

BS Computer Science | CGPA 3.28/4.0

August 2016 – June 2020

- Relevant Courses: Distributed Systems, Networks Security, Software Engineering, Programming Languages, Network Centric Computing, Advanced Programming, Algorithms, Data Structures.

EXPERIENCE

Graduate Research Assistant

January 2022 - Present

SIGNAL Lab @ CSU

Fort Collins, CO

- Employed ML techniques to research potential AI aids to help human pilots maintain balance and prevent unrecoverable losses of control in aerospace conditions that lead to spatial disorientation.
- Published 4 papers in domains of embodiment, machine translation, low-resource language modelling, and human computer interaction (COLING 2022, (Dis)embodiment ACL 2022, HCII 2023, ACL 2023).

Graduate Teaching Assistant

January 2021 – Present

Colorado State University

Fort Collins, CO

- Courses: CS314 Software Engineering, CS455 Intro to Distributed Systems
- Mentored students in a semester-long project involving test-driven development of a full-stack web application using a Agile-based methodology.
- Held office hours and recitations to assist students in understanding course content through programming assignments, and quizzes, and facilitated grading through creation of automated scripts.
- Maintained GitHub Action runners for automated build-test workflows and web servers as part of *DevOps* for the Software Engineering course of 140+ students.

Freelance Software Developer

June 2020 – December 2020

Self Employed

Remote

- Developed 3 full-stack mobile and web applications using react.js, node.js, and flutter for clients based on their requirements and use cases.
- Led the development of a cross-platform mobile application for a food-delivery service; implemented real-time delivery tracking and performed a complete UI overhaul for the platform. The app is available on *Google Play Store* and has more than 5,000+ downloads.

Data Scientist

August 2020 – November 2020

Medialogic Pakistan Pvt Ltd.

Lahore, Pakistan

- Provided insights on behavioral patterns in television viewership and extrapolated demographic labels via a probabilistic model onto a 60% larger unlabelled viewership dataset for improved television ratings.

PUBLICATIONS

[1] **AxomiyaBERTa: A Phonologically-aware Transformer Model for Assamese.**

Abhijnan Nath, *Sheikh Mannan*, and Nikhil Krishnaswamy. In Findings of the Association for Computational Linguistics (Findings of ACL). ACL. 2023

[2] **Intentional Microgesture Recognition for Extended Human-Computer Interaction.**

Chirag Kandoi, Changsoo Jung*, *Sheikh Mannan**, Hannah VanderHoeven, Quincy Meisman, Nikhil Krishnaswamy and Nathaniel Blanchard. In International Conference on Human-Computer Interaction (HCII). Springer. 2023

[3] **Where am I and where should I go? Grounding positional and directional labels in a disoriented human balancing task.**

Sheikh Mannan and Nikhil Krishnaswamy. In Conference on (Dis)embodiment. ACL. 2022. [Link](#)

[4] **A Generalized Method for Automated Multilingual Loanword Detection.**

Abhijnan Nath, Sina Mahdipour Saravani, Ibrahim Khebour, *Sheikh Mannan*, Zihui Li and Nikhil Krishnaswamy. In International Conference on Computational Linguistics (COLING). ACL. 2022. [Link](#)

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, C/C++, Golang, Dart

Frameworks: React.js, Next.js, Node.js, JUnit, Jest, Flutter, WordPress

Tools: Git, Docker, GitHub Actions, VS Code, Selenium, Postman, Code Climate, Zenhub

Big Data: MapReduce, PySpark, Apache Storm, Hadoop, Horovod

Data Modelling: Pandas, Numpy, PyTorch, Pytorch-lightning, TensorFlow, Hugging Face, Scikit-Learn, Gymnasium, Stable-baselines3, Seaborn, Matplotlib, BeautifulSoup4