

# Tasmia Shahriar

Generative AI | Data Mining | HCI | AI Agents

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in [tasmia-shahriar](#) | [TasmiaShahriar](#) | <https://tasmiaahriar.github.io>

## EDUCATION

### North Carolina State University

#### PhD in Computer Science

Aug 2024 | AI in Education

#### MSc in Computer Science

Aug 2023 | CGPA 3.73/4

*Courses: Automated Learning and Data Analytics, Natural Language*

*Processing, Artificial Intelligence,*

*Advanced topics in Machine Learning, Algorithms, Research Design, Statistics*

## SKILLS

OVER 100000 LINES OF CODE

Java • Python • R • C++ • SQL

LIBRARIES AND FRAMEWORK

Pytorch • CUDA • OpenAI • Scikit-learn • NumPy • Pandas • nltk • spacy • Tensorflow • SciPy

OTHER TOOLS

Git • Jupyter • Shell • Microsoft Excel • Google Sheets

RESEARCH METHODS

Contextual Inquiry • Survey design • A/B testing • Think-aloud study • Prototyping • Wizard of Oz study.

AREA OF EXPERTISE

Statistical Analysis



Generative AI



Data Mining



Deep Learning



## EXTRA CURRICULAR

Program Committee Member, AIED conference, 2023 and 2024.

National Hackathon Champion, ICT Department, Bangladesh, 2016.

Champion in Mind Spark Business Case Competition, BUET, Bangladesh, 2017

## WORK EXPERIENCE

### Graduate Research Assistant

Aug 2019 – Aug 2024 | North Carolina State University

- Published 4 first authored papers. See [Google Scholar](#).
- Collaborated with over 300 middle school students and 20 in-service teachers for data collection via surveys, A/B experiments, and think-aloud studies.

### Graduate Teaching Assistant

Aug 2018 – Aug 2019 | North Carolina State University

- Managed 120 students for HCI, Discrete Mathematics and Computer Organization and Assembly Language course
- Developed assignments and examination rubrics.
- Facilitated student inquiries through Moodle and Piazza.

### Software Engineer

Feb 2017 – June 2018 | Infosapex Ltd | Bangladesh

- Collaborated with end users for prototyping.
- Fullstack agile development and deployment of 2 websites including e-commerce and process automation.
- Designed AR-based Android app for e-commerce website.

## PROJECTS

### Modeling Conversational Questions to Enhance Learning

Research | IEC Lab | NCSU | 2020-2024

- Used OpenAI Large Language Model with chain-of-thought prompting to generate context-aware questions, improving learning outcomes by 13% and reducing hallucinations by 15%. See [Google Scholar](#)

### Metadata Extraction from Educational Videos

Research | LearnLab | CMU | 2023

- Extracted features from educational YouTube videos (e.g., questions, contexts, solutions, off-topic elements) using LangChain ([github](#))

### Intrusion Detection in Network Flow Data

Course Project | Automated Learning and Data Analytics | NCSU | 2023

- Used Scikit-learn package for data preprocessing and utilized Principal Component Analysis and Information Gain for feature engineering.
- Developed a multitask deep neural network using keras and Tensorflow, achieving a 98.87% accuracy. ([github](#))

### Itinerary Summarization with Temporal Information from Travelers' Blog

Course Project | Natural Language Processing | NCSU | 2023

- Location-based clustering using nltk and spacy, integrating event extraction and dependency parsing, to sequence places in travelers' blog posts.
- Achieved a 60.4% BLEU score; (baseline 48.5%) ([github](#))