

# Akib Sadmanee

Natural Language Processing | Large Language Models | Multi-document Text Summarization

✉ sadmanee@hawaii.edu    ☎ +1 (808)384-5855    🔗 akibsadmanee.github.io

🎓 Scholar    in LinkedIn    🐙 Github

## Education

### PhD in Computer Science

August 2024 – Current

(Focus: Large Language Models and Multi-document Text Summarization)

University of Hawai'i at Mānoa

### Master of Science in Computer Science

August 2022 – July 2024

University of Hawai'i at Mānoa (CGPA: 4.00/4.00)

### Bachelor of Science in Computer Science and Engineering

January 2016 – December 2019

Independent University, Bangladesh (CGPA: 3.78/4.00)

## Publications

- **Sadmanee, A.**, Hong, S., Leigh, J. & Belcaid, M. Harnessing Hierarchical Clustering in Salience-Driven Text Summarization in Americas Conference on Information Systems (2025) - Under review
- **Sadmanee, A.\***, Sadman, N.\*, Tanveer, M. I., Amin, M. A. & Ali, A. A. Intrinsic evaluation of bangla word embeddings in International Conference on Bangla Speech and Language Processing (2019), 1–5. (\* denotes co-first author)
- Deb, T., **Sadmanee, A.**, Bhaumik, K. K., Ali, A. A., Amin, M. A. & Rahman, A. Variational stacked local attention networks for diverse video captioning in Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (2022), 4070–4079.
- Gupta, K. D., Sadman, N., **Sadmanee, A.**, Sarker, M. K. & George, R. Behavioral recommendation engine driven by only non-identifiable user data. Machine Learning with Applications 11, 100442 (2023).
- Gupta, K. D., **Sadmanee, A.** & Sadman, N. A Safer Approach to Build Recommendation Systems on Unidentifiable Data. in International Conference on Agents and Artificial Intelligence (2022), 589–596.
- Sadman, N., **Sadmanee, A.**, Gupta, K. D. & George, R. HeteroGenius: An Improvised 'Intelligence' in Heterogeneous Graph Transformers in 2022 21st IEEE International Conference on Machine Learning and Applications (ICMLA) (2022), 849–854.

## Research and Work Experience

### Graduate Research Assistant

January 2023 – Ongoing

University of Hawai'i at Mānoa | Natural Language Processing

- Conducted original research with Dr. Mahdi Belcaid on novel, efficient text summarization methods that address the weaknesses of the Large Language Models.
- Developed a platform using TypeScript and React for researchers to upload and interact with research papers.
- Currently working on novel ideas for generating automated literature reviews from scientific research papers.

### Junior Machine Learning Engineer

October 2021 – July 2022

Silicon Orchard Ltd. | Artificial Intelligence

- Implemented a speech recognition system using end-to-end sequence modeling.
- Developed a chatbot for the e-shop employing meta learning techniques and intent datasets.
- Conducted research and published work on recommender systems using unidentifiable user data and on improving graph transformers.

### Research Assistant

February 2020 – January 2021

Independent University, Bangladesh | Natural Language Processing

- Conducted original research under Dr. Amin Ahsan Ali and Dr. AKM Rahman on generating video captions and Bangla language models.
- Implemented the language modeling component for video captioning.
- Evaluated generated sentences using a RoBERTa-based sentence entailment model.

## Teaching and Mentorship Experience

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**Mentor** (AI-based Speech to text and Medical Data processing)

June 2024

Scalable Analytics and Informatics Lab

- Mentored 9 high school students to develop “Parrot Forms,” an AI system for transcribing doctor–patient conversations and populating mock electronic medical records.
- Instructed on the use of AI tools like WhisperAI, ChatGPT, and Amazon Transcribe.

**Mentor** (AI-based Mobile Application)

June 2023

Scalable Analytics and Informatics Lab

- Guided 7 high school students in developing a mobile expense tracking app.
- Provided training on AWS, data structures, APIs, and no-code platforms (e.g., Appgyver).

**Assistant Mentor** (Ethics and Biases of AI)

February 2023 – May 2023

AI4all Program, Discover AI

- Designed and delivered introductory content on AI for undergraduates.
- Facilitated discussions on ethical AI use and biases.
- Assisted students with project ideation, dataset selection, debugging, and weekly consultations.

**Graduate Teaching Assistant** (Algorithms and Big Data Analysis)

August 2022 – December 2022

University of Hawai'i at Mānoa

- Taught data structures and algorithms for efficient data storage, retrieval, and big data processing.
- Guided students on differences between traditional data processing and big data methodologies.

**Teaching Assistant** (Artificial Intelligence)

January 2020 – April 2020

Independent University, Bangladesh

- Conducted hands-on tutorials on PyTorch.
- Assisted undergraduates with final project design and debugging.

## Presentations

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**Data Collection Ethics** [Oral]

August 2022

- **Location:** Online (Zoom)
- **Event:** International Conference on Agents and Artificial Intelligence

**Evaluation of Bangla word embeddings** [Poster & Oral]

September 2019

- **Location:** Shahjalal University of Science and Technology, Bangladesh
- **Event:** International Conference on Bangla Speech and Language Processing

**Bangla text data Analysis with embeddings** [Poster]

March 2019

- **Location:** North-South University, Bangladesh
- **Event:** ACM SIGCHI Summer School

## Service and Leadership Activities

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**Volunteer Beach Cleanup**

January 2024

- Participated in a seashore cleanup, collecting harmful wastes from the Cox's Bazar sea beach.

**High School Science Fair Judge**

April 2019

- Evaluated local high school science projects and provided constructive feedback.

## President - Notre Dame Abritti Dal

June 2014 – June 2016

- Organized weekly meetings and hosted nationwide competitions for club members of the Bangla poem recitation club of my high school.

## Extracurricular Activities

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Competed in Aloha Data AI Hackathon (3rd Place) University of Hawai'i at Mānoa	April 2025
Attended Workshop on Conference Poster Creation University of Hawai'i at Mānoa	December 2023
Attended ACM SIGCHI Summer School North-South University, Bangladesh	March 2019
Competed in Inter University Hackathon (2 <sup>nd</sup> Place) Notre Dame University, Bangladesh	February 2017
Attended Maker's Camp (Made a simple robot) Center for Cognitive Skill Enhancement Lab, IUB, Bangladesh.	December 2016

## References

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### Mahdi Belcaid, Ph.D.

Associate Professor,  
Department of Information and Computer Science,  
University of Hawai'i at Mānoa,  
Honolulu, HI  
(Contact details available upon request)

### Md. Iftekhar Tanveer, Ph.D.

Senior Scientist,  
Spotify,  
Cambridge, MA,  
(Contact details available upon request)