Tashin Hossain

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Research Interests

Natural language processing (NLP), large language model, computational social science, information retrieval, opinion mining, and multimodal information processing.

Education

B.Sc. (Engg.) 2018-2023
Computer Science and Engineering (CSE)
University of Chittagong, Chittagong, Bangladesh.

Job Experience

- Lecturer, Computer Science and Engineering,
  Premier University, Chittagong, Bangladesh. July, 2024 ∼ Present
- Adjunct Lecturer, CSE,
  International Islamic University Chittagong (IIUC), Bangladesh. Jan, 2024 ∼ June, 2024

Laboratory Affiliations

- At Knowledge Data Engineering and Information Retrieval Laboratory, Toyohashi University of Technology, Japan. Supervisor: Prof. Dr. Masaki Aono
  URL: www.kde.cs.tut.ac.jp Duration: May, 2020 ∼ Present
- At CSECU Data Science Group (CSECU-DSG) laboratory as an undergraduate research student, University of Chittagong, Bangladesh. Supervisor: Dr. Abu Nowshed Chy
  URL: https://tinyurl.com/nowshedcu Duration: May, 2020 ∼ Present

Research Publications

International Journals:

1. Jannatun Naim, **Tashin Hossain**, Fareen Tasneem, Abu Nowshed Chy, and Masaki Aono, *Leveraging Fusion of Sequence Tagging Models for Toxic Spans Detection*, Neurocomputing (Elsevier), Vol.-500, pp. 688-702, 21 August, 2022. (⋆ *The first three authors have equal contributions.)*

Workshop/Technical Papers:

1. **T. Hossain et al.**, *KingsmanTrio at SemEval-2023: Analyzing the Effectiveness of Transfer Learning Models for Explainable Online Sexism Detection*, In SemEval-2023, Canada. (**Rank: 32nd out of 130 teams**)
2. **T. Hossain et al.**, *CSECU-DSG at SemEval-2023: Segmenting Legal Documents into Rhetorical Roles via Fine-tuned Transformer Architecture*, SemEval-2023, Canada. (**Rank: 22nd out of 27 teams**)
3. **T. Hossain et al.**, *CSECU-DSG at SemEval-2021: Orchestrating Multimodal Neural Architectures for Identifying Persuasion Techniques in Texts and Images*, SemEval-2021, Thailand. (**Rank: 6th out of 15 teams**)
4. **T. Hossain et al.**, *CSECU-DSG at SemEval-2021: Leveraging Ensemble of Sequence Tagging Models for Toxic Spans Detection*, SemEval-2021, Thailand. (**Rank: 25th out of 120 teams**)
5. **T. Hossain et al.**, *CSECU-DSG at WNUT-2020: Exploiting ensemble of transfer learning and hand-crafted features for identification of informative COVID-19 English tweets*, W-NUT 2020, Online, 2020. (**Rank: 38th out of 55 teams**)

Awards and Honors

International Accolades:

- **4th Best Scoring Team**, HerWILL Datathon 2022, April 23-25, 2022, Virtual.

National Accolades:

- **UGC Merit Scholarship** for outstanding results in B.Sc. Examination in Faculty of Engineering, awarded by University Grants Commission (UGC), Bangladesh.

Programming Contest:

- **3rd out of 30**, Grace Hopper Girls' Programming Camp 2019, Chittagong, Bangladesh (BD).
- Inter-University Programming Contest 2020, East Delta University, BD.

- Inter-University Girls' Programming Contest 2019, North South University, BD.
- National Girls' Programming Contest 2018, 2019, Daffodil International University, BD.

Professional Training and Activities

- Reviewer at the International Workshop on Semantic Evaluation (SemEval-2021 $\sim$ Present).
- ACL Year-Round Mentorship Program (Virtual) at ACL. September 9, 2021 $\sim$ Present
- WiNLP Mentorship Program (Virtual) at EMNLP 2021. November, 2021

Academic Project Experience

- Anticipating Ailments Based on Symptoms: A Rule-Based System
  Description: I've developed a rule-based expert system trained to recognize 20 distinct diseases with 64 distinct symptoms. It can make predictions based on its extensive knowledge of specific diseases.
  Technology Used: Prolog, Kaggle.
- Undergraduate Student Helping Website
  Description: This is a web application that provides undergraduate students with a forum for undergraduate-related questions. In addition to a chatbot, this website provides a notification system for tracking various contests, scholarships, seminars, and conferences.
  Technology Used: Django, Python, Html, CSS, PostgreSQL.
- Medical Information System
  Description: The software runs on Android and has a three-tiered structure. It features an appointment scheduler, a report display, and a symptom checker.
  Technology Used: Android Studio, Python, Firebase, TensorFlow, Canva.
- Robo-Biz
  Description: The Android app is a 3-tier architecture-based platform developed in Java using Android Studio, featuring tutorials, a marketplace for buying and selling robot parts, and a newsfeed for sharing informative robotics news.
  Technology Used: Android Studio, Python, Firebase, TensorFlow, Canva.

Technical Skills

Programming Languages:	Python, C, C++, JAVA, PHP, R.
Machine Learning Libraries:	Numpy, Pandas, NLTK, SciKit-Learn, spaCy, Hugging Face, Keras, TensorFlow, PyTorch.
Web Designing Tools:	Django, Flask, HTML, XML, JavaScript, CSS, jQuery, UML.
IDE Experiences:	Google Colaboratory, PyCharm, Code Blocks, Android Studio, Visual Studio Code, Notepad++, LaTeX.
DBMS Experiences:	MySQL, PostgreSQL.

Language Proficiencies

Bengali	Vernacular
English	Proficient in all aspects

References

- Available on demand