

Ehsanul Haque Nirjhar

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College Station, TX

EDUCATION

Texas A&M University, College Station, TX September 2017 – Present
Ph.D. in Computer Science, GPA: 3.77/4
Advisor: [Theodora Chaspari](#)

Bangladesh University of Engineering and Technology, Dhaka, Bangladesh 2015
B.Sc. in Electrical and Electronic Engineering, GPA: 3.81/4

RESEARCH INTERESTS

Affective Computing, Behavioral Signal Processing, Machine Learning

RESEARCH EXPERIENCE

HUBBS Lab, Texas A&M University March 2019 – Present
Ph.D. Student/Graduate Research Assistant

- Developed multimodal bio-behavioral signal trajectories to quantify communication anxiety in public speaking settings using a corpus of over 200 audio clips
- Implemented wearable-based prediction model to detect emotional distress in walkable built environment in smart city environment
- Collaborated with a multi-disciplinary team to plan an experimental study to identify social skill issues faced by US veterans' in job interviews, and correlate them to a multimodal computational framework

INDIE Lab, Texas A&M University September 2017 – August 2018
Ph.D. Student/Graduate Research Assistant

- Created an information visualization tool with D3.js to collect user interaction data for analytic provenance research
- Performed user interaction segmentation in multidimensional dataset analysis using interaction log and eye-tracking data

Bangladesh University of Engineering and Technology July 2014 – September 2015
Undergraduate Researcher

- Employed traditional machine learning models for human activity recognition by extracting patch-based local feature from video clips using Weizmann, and KTH datasets

Samsung R&D Institute, Bangladesh August 2014 – March 2015
Undergraduate Intern

- Completed 180-hour internship in wearable device group to develop a prototype of sketch recognition device applying signal processing techniques

PUBLICATIONS

1. **E. H. Nirjhar**, A. Behzadan, and T. Chaspari, "Knowledge- and Data-Driven Models of Multimodal Trajectories of Public Speaking Anxiety in Real and Virtual Settings," To appear in *Proceedings of the 2021 International Conference on Multimodal Interaction (ICMI '21)*
2. A. A. Tutul, **E. H. Nirjhar**, and T. Chaspari, "Investigating Trust in Human-Machine Learning Collaboration: A Pilot Study on Estimating Public Anxiety from Speech," To appear in *Proceedings of the 2021 International Conference on Multimodal Interaction (ICMI '21)*

3. M. Yadav, M. N. Sakib, **E. H. Nirjhar**, K. Feng, A. Behzadan, and T. Chaspari, “Exploring individual differences of public speaking anxiety in real-life and virtual presentations,” in *IEEE Transactions on Affective Computing*, doi: 10.1109/TAFFC.2020.3048299
4. M. von Ebers, **E. H. Nirjhar**, A. H. Behzadan, and T. Chaspari, “Predicting the effectiveness of systematic desensitization through virtual reality for mitigating public speaking anxiety,” in *Proceedings of the 2020 International Conference on Multimodal Interaction*, 2020, pp. 670–674.
5. **E. H. Nirjhar**, A. Behzadan, and T. Chaspari, “Exploring bio-behavioral signal trajectories of state anxiety during public speaking,” in *ICASSP 2020-2020 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, IEEE, 2020, pp. 1294–1298.
6. A. M. Pena, **E. H. Nirjhar**, A. Pachuilu, T. Chaspari, and E. D. Ragan, “Detecting changes in user behavior to understand interaction provenance during visual data analysis,” in *IUI Workshops*, 2019.

SKILLS

Programming Languages	Python, C/C++, MATLAB, Javascript, x86 Assembly, HTML
Tool/Library	Tensorflow, Pytorch, Scikit-learn, Opensmile, Ledalab
Data Visualisation	matplotlib, Tableau, D3.js
Research Method	Experiment design, Quantitative Analysis, Interview, In-lab study

TEACHING EXPERIENCE

Texas A&M University September 2018 – August 2019
Graduate Teaching Assistant, Computer Science & Engineering

- Designed and conducted programming labs for CSCE 206 (Structured Programming in C) and CSCE 110 (Programming I)
- Assisted course instructors in designing and grading home-works, programming assignments, and exams

Eastern University, Dhaka, Bangladesh October 2015 – May 2017
Lecturer, Electrical & Electronic Engineering

- Instructed undergraduate level courses on signal processing, numerical methods, and electrical circuits
- Maintained office hours for solving students’ problems about the course materials

HONORS & AWARDS

Student Travel Grant (ICASSP 2020) , Texas A&M University	Spring 2020
Dean’s List Award , Bangladesh University of Engineering and Technology	2011, 2013
Technical Scholarship , Bangladesh University of Engineering and Technology	2011-2015

PROFESSIONAL SERVICES

Student Member: IEEE, IEEE-SPS, ACM
Reviewer: ICMI’20, IMWUT’20, IEEE Transactions on Affective Computing, ACII’21, ICMI’21
Student Volunteer: ACII’21

RELEVANT COURSEWORKS

Digital Signal Processing, Human Behavior Analytics, Artificial Intelligence, Information Theory, Machine Learning, Digital Speech Processing

WORK AUTHORIZATION

Eligible to work as part of internship in the U.S.A. with Curricular Practical Training (CPT)