Enamul Hassan

Curriculum Vitae

PhD Student
Department of Information Science (Data Science)
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 Github   LinkedIn   StackOverflow

Education

2023–Present   **Doctor of Philosophy, Information Science with a concentration in Data Science (DS-IS)**, *University of North Texas (UNT)*, Texas, USA.
GPA : 4.00/4.00 (One semester - Fall 2023)

2012–16   **Bachelor of Science (Engineering), Computer Science and Engineering (CSE)**, *Shahjalal University of Science and Technology (SUST)*, Sylhet, Bangladesh.
CGPA : 3.79/4.00 (1st position among a class of 63)

Experience

2023–Present   ***Research Assistant***, *Department of IS*, University of North Texas (UNT), Texas, USA.
- *Member*, SCORE (Security and Cognitive Recommender Systems Laboratory) Lab
- Coordinator and Content Creator, PERFECT (Providing Environment and Resources For STEM 9th-12th graders in Effective Cybersecurity Training) Project

2023–Present   ***Faculty (On leave)***, *Department of CSE*, Shahjalal University of Science and Technology (SUST).

2017–2023   ***Faculty***, *Department of CSE*, Shahjalal University of Science and Technology (SUST).
- **Course Teacher:** edifying basic programming in different languages (C/C++, Python), data structures, artificial intelligence, cloud computing (AWS), competitive programming, advanced database system, web engineering, etc. courses several times
- **Chairman (2020-23) and member (2018-23) of different exam committees:** consulting and evaluating final year undergrad projects and thesis as an exam committee member
- **Member, Technical Sub-committee, Admission Test (2017-2023):** highly involved in technical committee of the entrance exam of the university from the beginning
- **Member, Curriculum Committee, Department of CSE (2020-23):** working in diverse committees like curriculum development, exam, procurement committee
- **Lead Coach, Competitive Programming wing, Department of CSE (2020-23):** mentoring as the lead of the Competitive Programming wing
- **Undergrad Coordinator, CSE (2020-22):** managed course distribution, class routines, exam routines, etc. as next to head of the department
- **Member, Total SUST (2022-23):** a project to make the administrative processing paperless
- **Examiner, Technical Staff Recruitment (2022-23):** taken different competitive exam for recruiting work force for the technical posts of the university
- **Member, Natural Language Processing Lab (NLP), SUST:** discussed and contributed to different NLP tasks in Bengali.

2017–2022   ***Adjunct Faculty (Part time)***, *Department of CSE*, Sylhet Engineering College, Sylhet, Bangladesh.
- teaching basic programming, database system, artificial intelligence (AI), machine learning (ML), etc.
- supervising final year undergrad projects and thesis

2019–2023   ***IT Consultant (Part time)***, *Center for Research, Testing and Consultancy (CRTC)*, CSE, SUST, Sylhet.
- collaborating in requirement analysis, designing the architecture and the database, planning the procurement schedule in the automation of a govt. hospital, i.e. Osmani Medical College and also the automation of a semi-govt. organization for preserving provident fund for the tea estate workers
- worked as a Validator in collaboration with Gigatech Ltd. in a govt. project for emotion annotation

2017–2023   ***Instructor***, *Cisco Networking Academy*, SUST, Sylhet, Bangladesh.
- educating CCNA Routing and Switching v6.0 and v7.0

2022–2023   ***Instructor***, *AWS Academy*, SUST, Sylhet, Bangladesh.
- educating Cloud Computing Fundamentals

Achievements in Competitive Programming

2022   Achieved 50th place in **45th ACM ICPC World Finals Contest, Dhaka** organized by *ICPC Foundation, USA* as Coach

2021   Achieved 2nd place in **ACM ICPC Dhaka Regional Preliminary - 2020** arranged by *University of Dhaka, Dhaka, Bangladesh* as Coach

2021   Achieved 4th place in **ACM ICPC Dhaka Regional - 2020** arranged by *University of Dhaka, Dhaka, Bangladesh* as Coach

2023   Achieved 1st place in **BJIT Presents BUET CSE FEST 2023 Inter University Programming Contest** arranged by *Bangladesh University of Engineering and Technology, Dhaka, Bangladesh* as Coach

2018–19   Participated in **ACM ICPC World Finals Contest** organized by *ICPC Foundation, USA* as Co-coach

2015   Achieved 14th position in **ACM ICPC Dhaka Regional - 2015** arranged by *North South University, Dhaka, Bangladesh* as Contestant

2015   Achieved 8th position in **SUBIUPC - 2015** arranged by *State University, Dhaka, Bangladesh* as Contestant

2014   Achieved 12th position in **ACM ICPC Dhaka Regional - 2014** arranged by *University of Business and Technology, Dhaka, Bangladesh* as Contestant

Publications

Journal Articles

2023   Tareque Rahman Ornob, Gourab Roy, and **Hassan, Enamul**. Covidexpert: A triplet siamese neural network framework for the detection of covid-19. *Informatics in Medicine Unlocked*, page 101156. Elsevier, 2023.

2019   **Hassan, Enamul**, Md Nazim Uddin, and Moudud Ahmed Khan. Bangla document categorization using term graph. *International Journal of Computer Applications*, volume 975, page 8887, 2019.

2019   Masum Billah and **Hassan, Enamul**. Depression detection from bangla facebook status using machine learning approach. *International Journal of Computer Applications*, volume 975, page 8887, 2019.

Selected Conference Proceedings

2023   Humayra Noureen, Mollika Deb, and **Hassan, Enamul**. Sahacharza: Fostering women's wellness via ai-enhanced bengali conversations. In *26th International Conference on Computer and Information Technology (ICCIT), Cox's Bazar, Bangladesh*, 2023.

2022   Nirjas Mohammad Jakilim, Sm Mahamudul Hasan, and **Hassan, Enamul**. A benchmark of machine learning and deep learning algorithms for detecting fake news in bangla language. In *2022 4th International Conference on Sustainable Technologies for Industry 4.0 (STI)*, pages 1–6, 2022.

2022   Khondoker Ittehadul Islam, Tanvir Yuvraz, Md Saiful Islam, and **Hassan, Enamul**. Emonoba: A dataset for analyzing fine-grained emotions on noisy bangla texts. In *Proceedings of the 2nd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 12th International Joint Conference on Natural Language Processing*, pages 128–134, 2022.

Selected Research Grants

2022–23   **Development of a Large Corpus of Spontaneous Speech for Improved Speech Recognition in Bangladeshi Bangla**, *Role: Co-Investigator*, Amount: ∼$4300, Project # AS/2022/1/24.
A project to develop a large speech corpus for research in recognition in Bangla

2021–22   **BATS: A Dataset for Bangla Automatic Text Summarization**, *Role: Principal Investigator*, Amount: ∼$4000, Project # AS/2021/1/19.
A project to develop a dataset of ∼100k text summary documents in Bangla

2020–21   **BED: A Bangla Emotion Dataset for Emotion analysis of Bangla text**, *Role: Principal Investigator*, Amount: ∼$2300, Project # AS/2020/1/27.
A project to develop a dataset of around 50k tagged sentences with 6 basic emotions in Bangla

2019–20   **Design and Implementation of an Automated Assessment System for MCQ and Subjective Tests for SUST**, *Role: Principal Investigator*, Amount: ∼$2000, SUST Research Center Project # AS/2019/1/20.
An Exam taking WebApp that allows different types of definite answer questions as well as descriptive questions which are evaluated using python program

2018–19   **SUST Online Judge (SOJ): A Programming platform for all the Students**, *Role: Co-Investigator*, Amount: ∼$2000, SUST Research Center Project # AS/2018/1/11.
An online judge for arranging competitive programming and programming exams in different languages

Scholarships & Awards

2012–17 Recipient of **University Scholarship** by **SUST** for each year final result in undergrad

Voluntary Activities

2023–Present **Advisor** at **RoboSUST**, a voluntary organization to work with robot.

2021–Present **Advisor** at **SUST Science Arena**, a voluntary organization to make people aware about science.

2020–2023 **Organizational Admin** at different MOOC portal like **Coursera, edX**, to encourage students to complete online courses in pandemic

2019–2023 **Reviewer** at **ICERIE 2019**, **ICBSLP 2019**, **ICERIE 2021**, and **JIKM**

2014–Present **Reviewer and Contributor** at **Stackoverflow**, Reputation point: 5.3k+

2014–Present **Problem Setter and Judge** at **SUST Intra-University Programming Contest**.

2014 **Volunteer** at **NHSPC - 2014**, Sylhet Region. A nation-wide programming contest at school level.

Selected Projects

2017–19 **MBBS and BDS Admission Test Result Processing Software**, Team Lead: Dr. Muhammed Zafar Iqbal.
a system for result processing of the entrance tests for around 50 different Medical College and around 10 BDS College with around 1 lac students.

2020-21 **SUST Exam Management System**, *Supervised as a series of different year final course project*, Developers: 2 (4th year 2nd semester Project), 6 (Web Engineering Project), 4 (2nd year final Project).
different types of questions are adopted in the online exam like MCQ, matching, coding problems, descriptive answers questions which will be evaluated by a python code; basic proctoring is also added.

2020-21 **SUST Class Routine Management**, *Supervised as a Web Engineering course project*, Students: 6.
a visualization of an algorithmic solution to develop class routine for low classroom resources honoring the teachers preference at its best

2016 **NanoMapper: An Efficient Read Mapping Algorithm Using Gapped Minimizer and FM-indexing for Oxford Nanopore Long Noisy Reads**, *Undergrad Thesis*, Supervisor: Md. Eamin Rahman.
an efficient tool for mapping long ONT erroneous reads using several techniques

2015 **Mancala Games**, *AI Project*, Course Teacher: Marium-E-Jannat.
an optimal play mancala game computer player, based on mini-max algorithm with alpha-beta pruning, developed in Java

2014 **SUST Admission Test Seatplan Management**, *Database Project*, Course Teacher: Sheikh Nabil Mohammad.
allocation and testing of seatplan of entrance exam of SUST

Language and Skills

Duolingo Overall 120: Literacy 120, Conversation 110, Comprehension 130, Production 100 (On Jan 12, 2024)

IELTS Overall 6.5: Reading 6, Writing 6, Listening 6, Speaking 7 (Test Date: Nov 13, 2021 - Expired)

Comp. Lang. C/C++, Java, Python, Javascript, Google Script, Matlab, Assembly, HTML, CSS, Markdown, LaTeX

Technologies Tensorflow, Pandas, NumPy, NLTK, Git, Github, Atom, Sublime Text, Anaconda, Jupyter Notebook, SPSS, Tableau, AWS Cloud Computing

Databases MySQL, SQLite, PostGRE, Oracle SQL, MS Access, MongoDB

Online Courses

Accomplished C, Python, Machine Learning, Bioinformatics, etc. related courses in *Coursera*, MongoDB for Java by *MongoDB University*, SPSS, LMS Configuration related courses by *BdREN*. Completed Cloud Computing Foundation Course offered by *AWS*.

Field of Interest

Data Mining, Big Data, Internet of Things (IoT), Machine Learning, Deep Learning, Artificial Intelligence, Networking, Cybersecurity, Cloud Computing, Natural Language Processing, Bioinformatics, Large Language Models, Programming Language

Undergraduate Teaching Experience

First year

CSE 133, PGD 113   **Structured Programming Language**, *6 times*, Credits: 4.0/3.0.
Computer Science and Engineerig (CSE) - 5 times, Institute of Information and Communication Technology (IICT)

CSE 134   **Structured Programming Language Lab**, *5 times*, Credits: 2.0/3.0.

CSE 137   **Data Structures**, *4 times*, Credits: 3.0.

CSE 138   **Data Structures Lab**, *4 times*, Credits: 2.0.

CSE 103M, 103E, 203J, 103   **Introduction to Computer Language**, *5 times*, Credits: 2.0/3.0.
Mathematics (MAT, SUST) - 2 times, Genetic Engineering and Biotechnology (GEB, SUST), Electrical and Electronic Engineering (EEE, SUST), EEE (SEC - Sylhet Engineering College)

CSE 104M, 104E, 204J, 102, 104   **Introduction to Computer Language Lab/ Sessional**, *7 times*, Credits: 1.5/2.0.
MAT (SUST) - 2 times, GEB (SUST), CSE (SEC), EEE (SEC) - 2 times, EEE (SUST)

Second year

SWE 222   **Introduction to Competitive Programming**, Credits: 1.5.
Software Engineering (SWE, SUST)

CSE 202c, 202g   **Introduction to Computing Applications**, *2 times*, Credits: 3.0.
Economics (ECO, SUST), Social Work (SCW, SUST)

CSE 205O   **Database Management and Programming**, *2 times*, Credits: 2.0.
Statistics (STA, SUST)

CSE 206O, 206i   **Database Management and Programming Lab**, *3 times*, Credits: 3.0.
STA (SUST) - 2 times, Business Administration (BUS, SUST)

CSE 250   **Project Work II**, *2 times*, Credits: 1.0.

CSE 214K   **Introduction to Programming with Python Lab**, Credits: 2.0.
Chemistry (CHE, SUST)

Third year

CSE 501, 333   **Database Management System**, *3 times*, Credits: 3.0.
CSE (SEC) - 2 times, CSE (SUST) - shared topics

CSE 502   **Database Management System Lab**, *2 times*, Credits: 1.5/2.0.
CSE (SEC)

CSE 701, 337, 405   **Artificial Intelligence**, *4 times*, Credits: 3.0.
CSE (SUST), CSE (SEC) - 2 times, CSE (Sylhet International University - SIU)

CSE 702, 338, 406   **Artificial Intelligence Lab/ Sessional**, *4 times*, Credits: 1.5.
CSE (SUST), CSE (SEC) - 2 times, CSE (SIU)

Fourth year

CSE 455   **Advanced Database System**, *2 times*, Credits: 3.0.

CSE 456   **Advanced Database System Lab**, *2 times*, Credits: 1.5.

CSE 491   **Web Engineering**, *2 times*, Credits: 2.0.
Second Major in CSE, SUST

CSE 492   **Web Engineering Lab**, *2 times*, Credits: 1.5.
Second Major in CSE, SUST

CSE 446   **Web Technologies Lab**, Credits: 2.0.

CSE 453   **Cloud Computing**, Credits: 3.0.

CSE 454   **Cloud Computing Lab**, Credits: 1.5.

CSE 815   **Machine Learning**, Credits: 3.0, CSE (SEC).

CSE 816   **Machine Learning Lab**, Credits: 1.5, CSE (SEC).

CSE 450, 452, 480, 482   **Project/Thesis I/II**, *Role: Supervisor, Report Evaluator, Committee Member*, Credits: 2.0/4.0.
Supervised 29 final-year students of SUST and 16 of SEC; evaluated approximately 80 reports for final-year theses and projects spanning various fields such as Natural Language Processing, Image Processing, Deep Learning, Blockchain, Machine Learning, and more; served as an active committee member for final-year projects or theses for 5 batches.