Syed Zuhair Hossain

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in syed-zuhair-hossain   ⌨ ZuhairHossain

Career Objective

With a profound passion for Human-Computer Interaction and a commitment to social good, I aspire to develop transformative, low-cost technologies that address the needs of low-literate populations in Bangladesh. My extensive field research experience provides invaluable insights into these communities, driving my dedication to bridge the digital divide. Eager to collaborate with visionary scholars and institutions, I aim to harness technology to foster inclusivity, enhance accessibility, and create a more equitable society.

Education

BSc	**Brac University**, Computer Science & Engineering	Dhaka, Bangladesh Jan. 2019 to May 2023
	Notable Coursework: Human Computer Interface, Neural Networks, Artificial Intelligence, Software Engineering, Introduction to Robotics.	
HSC	**Dhaka City College**, Science Department • GPA: 5.00/5.00	Dhaka, Bangladesh Jan. 2016 to Dec. 2018
SSC	**Ideal School and College**, Science Department • GPA: 5.00/5.00	Dhaka, Bangladesh Jan. 2010 to Dec. 2016

Paper Publications

Examining Large Language Models Within Autism-Related Contexts: A Systematic Review of Bias and (Mis)Representation

July 2025
COMPSAC 2025

Katelyn Pryor, Thorleif Coleman, *Syed Zuhair Hossain*, Eric Tootill, Shameem Ahmed,

COMPSAC 2025: IEEE International Conference on Computers, Software, & Applications

MonChitro: Unveiling The Stress and Depression About Future Among Undergraduate Students

Dec. 2024
NSysS'24
Read paper ⬈

Syed Zuhair Hossain, Anika Tahsin Miami, Jannatun Noor Mukta

NSysS'24: 11th International Conference on Networking, Systems and Security 2024

Poster Publications

NavConnect: Empowering Boatmen Through USSD-based Transportation Services
Syed Zuhair Hossain, Anika Tahsin Miami

Feb. 2024
HOTMOBILE '24
Read Poster Paper ⬈

HOTMOBILE '24: Proceedings of the 25th International Workshop on Mobile Computing Systems and Applications

Psychological Aspects and Potential Screening of Depression Among Cancer Patients

Dec. 2023
NSysS'23
Read Poster ⬈

Anika Tahsin Miami, Anika Priodorshinee Mrittika, *Syed Zuhair Hossain*, Jannatun Noor Mukta

NSysS'23: 10th International Conference on Networking, Systems and Security 2023

Undergrad Thesis

Beyond words: an exploration of free-hand sketches and EEG-based neurobiological signatures to unveil the underlying depression among cancer patients

April 2023
Brac University
Read Paper ⬈

Anika Tahsin Miami, Anika Priodorshinee Mrittika, *Syed Zuhair Hossain*, Jannatun Noor Mukta

Research Grant

Research Seed Grant Initiative 2023   July 2023
Brac University

Analyzing Psychological As Well As Physiological Aspects of Cancer Patients And Dealing with Their Griefs through Computing Solutions

Anika Tahsin Miami, Anika Priodorshinee Mrittika, *Syed Zuhair Hossain*, Jannatun Noor Mukta

Research Work Experience

Empathetic Computing Lab, *Virtual Internship*

University of South Australia & University of Auckland
Sept. 2024 to **Present**

- The project just kicked off with the aim of researching EEG-based user input preference detection.

NEAT (Next Generation Effective Affective Technology),
Remote Research Collaboration

Western Washington University, USA
June. 2024 to **Present**

- Mental health analysis of neurodivergent individuals, focusing on identifying patterns and developing strategies for improved well-being.

NSUHCI DIAL, *Undergrad Data Science Research Assistant*

Dhaka, Bangladesh
Oct. 2021 to Feb. 2022
5 months

- Alor Akash: Intersection of gender and technology in Bangladesh
- Japan Mental Health Dataset in Corona Pandemic

Professional Work Experience

Brac University, Instructor, App Development

Savar, Dhaka, Bangladesh
Sept. 2022 to **Present**

- Writing clean, maintainable, and efficient Dart code for Flutter framework.
- Collaborating with designers to implement UI/UX designs.
- Implementing features and functionality as defined by the project requirements.
- Assisting in the creation of user guides or help files for the end-users.
- Writing unit and integration tests to ensure code quality and reliability.

RedDot Digital IT Ltd., Assistant DevOps Engineer

Dhaka, Bangladesh
Feb. 2024 to **Present**

- Provisioning and managing cloud resources such as EC2 instances, RDS databases, and S3 buckets on AWS.
- Building Docker images for applications and services.
- Deploying and managing containerized applications using Kubernetes.
- Using Ansible for configuration management and orchestration of server environments.

RedDot Digital IT Ltd., Trainee DevOps Engineer

Dhaka, Bangladesh
June 2023 to Jan. 2024
7 months

- Automating deployment pipelines and workflows using GitLab CI/CD.
- Writing and maintaining shell scripts for automating tasks and managing systems.
- Monitoring system alerts and logs for issues using Prometheus & Grafana as well as Elasticsearch stack.
- Configuring Grafana dashboards for visualizing system and application performance.

RedDot Digital IT Ltd., DevOps Engineer, Intern

Dhaka, Bangladesh
Feb. 2023 to May 2023
7 months

- Setting up and maintaining monitoring solutions using Prometheus for metrics collection.
- Configuring Grafana dashboards for visualizing system and application performance.
- Integrating Elasticsearch for log aggregation and analysis.
- Monitoring system alerts and logs for issues.

IEEE BracU Student Branch, Webmaster

- Website Maintenance:
    - Perform regular updates to content, themes, and plugins.
    - Fix bugs and troubleshoot website issues.
- Security & Performance Management:
    - Implement security measures to protect the website from threats.
    - Monitor website performance metrics (load times, uptime) & Optimize images, scripts, and other elements to improve performance.
    - Regularly update software to patch vulnerabilities.

Dhaka, Bangladesh
Jan. 2021 to Dec. 2022
2 years

F2p, Web Developer and Designer

- Created a couple of WordPress websites for customers
- Content created for customers

Remote, Bangladesh
March. 2021 to Feb. 2022
1 year and 1 month

Centre for Emotional Intelligence & Innovation - CEII, Intern

- Administrative works
- Content creation for Promotion
- R&D for student activities and make content for students

Dhaka, Bangladesh
Sep. 2019 to Mar. 2020
7 month

Skills

Life skill: Leadership, Photography, Cycling, Graphics Designing, App Development

Automation Tools: Shell Scripting, Docker, Ansible, Terraform

Programming Languages: Java, C++, C, Python, HTML, CSS, JavaScript, PHP, SQL, Dart, YAML

Graphics Design Softwares: Adobe Illustrator, Photoshop, XD, Figma, Premiere Pro, After Effects

Conference Reviewer

Association of Computing Machinery (CHI'24 & CHI'25): Paper, Case Study and Alt.chi

ACM Conversational User Interfaces (CUI'24): Full Research Paper

ACM Conference on Designing Interactive Systems (DIS'24): Full Research Paper

International Conference on Soft Computing and its Engineering Applications (icSoftComp2022, icSoftComp2023, icSoftComp2024): Full Research Paper

Conference Volunteer

(MobileHCI)
ACM International Conference on Mobile Human-Computer Interaction

2024
Melbourne, Australia

(UbiComp / ISWC)

2024
Melbourne, Australia

(CHI PLAY)
Annual Symposium on Computer-Human Interaction in Play

2024
Tampere, Finland

(VIS)
IEEE Visualization

2024
Florida, USA

Conference Participation

- **International Conference on Soft Computing and its Engineering Applications**
  (icSoftComp2022, icSoftComp2023, icSoftComp2024)
- **Conference on Human Factors in Computing Systems** - CHI'23
- **Ubiquitous computing** -UbiComp'22

Projects

A Text-Based Healthcare Chatbot to Support Patients   2023
[(Project Demo)](#)

- A text-based healthcare chatbot can address this issue by providing 24/7 access to information and personalized support, thus alleviating patient concerns, reducing the burden on healthcare workers, and improving overall patient satisfaction and outcomes.
- Used Python, NLP, Heroku, Docker, Ngrok, and Rasa framework.

Analyzing Maternal Health in Nigeria using Machine Learning   2023

- This project aims to address Nigeria's high maternal mortality rate by using AI algorithms to predict maternal health risks and analyze data to identify patterns and trends. It will develop a user-friendly web app and dashboard for risk assessments and data visualization, ultimately enhancing maternal health outcomes through targeted interventions and accessible insights.
- Used Python.

BracU Faculty Info   2022

- Developed an electronic classroom where multiple users can view and simultaneously draw on a "chalkboard" with each person's edits synchronized.
- Used Flutter and Dart.

ROBUST   2020 to 2021

- ROBUST is a Podcast website where you can hear audio shows and download audio on the personal device.
- Used HTML, CSS, JS, PHP and SQL.

Improving Food Security and Crop Yield in Kenya Through Machine Learning   2021

- I identified underutilized farming land using satellite imaging, applied Kenyan opensource satellite imagery datasets for crop yield prediction, and developed a weather information sharing system for farmers to enhance farming decisions.
- Used JavaScript and Python.

Developing an AI-driven & Secure Online Marketplace   2021

- This project enhances Bangladesh's e-commerce sector by analyzing online marketplaces to identify technology, trust, and transaction issues. It develops AI-driven solutions for fraud detection, product recommendations, and marketplace improvements, with findings made open source to benefit regulators, businesses, and consumers.
- Used JavaScript and Python.

Professional Membership

Institute of Electrical and Electronics Engineers (IEEE), Student Member   Jan. 2021 to Present

Association for Computing Machinery (ACM), Student Member   Nov. 2023 to Present

Special Interest Group on Computer–Human Interaction (SIGCHI), Student Member   Nov. 2023 to Present

Professional Workshop

Writing for Interdisciplinary Computing Audiences in COMPASS '25   July 2025

Voluntary Leadership Roles

Society for the Popularization of Science, Volunteer & Organizer — Oct. 2021 to Present

BRAC University ACM Student Chapter, Mentor — Sept. 2021 to May. 2023

Robotics Club of Brac University, Director, Human Resource Department — Apr. 2022 to Mar. 2023

Bangladesh Junior Science Olympiad, Organizer — Dec. 2022 - Mar. 2023

Brac University Computer Club, Assistant Director, Creative Department — Jan. 2022 - Dec 2022

Bangladesh Mathematical Olympiad, Volunteer & Organizer — Jan. 2020 - Dec 2021

Dhaka City College Photography Club, Founder President — Jul. 2017 - Aug. 2018

Dhaka City College Science Club, Head of Photography — Jul. 2017 - Aug. 2018

Ideal Science and Technology Aiming Research Council-ISTARC, Panel Member — May. 2015 - Apr. 2016

Recreational Activities

Street Photography, Mountain Hiking, Cycling, Listening to Music, Visiting Art & Photography Exhibitions, Walking and explore the world

Professional Courses

BASIS & Skills for Employment Investment Program (SEIP): Mobile Application Development Course using Flutter — Oct. 2021 - Apr. 2022

British Council: Senior Young Learners, Upper-Intermediate (B2) Level Course — Apr. 2016 - May 2016

Workshops/Bootcamp

BracU Programming Skill Bootcamp in Brac University — Summer'2019

Machine Learning using Python by Gyanjam — Feb. 2019

Graphic Design by Creative IT Institute — Mar. 2019

Photography Workshop by Pixmama — Nov. 2018

Summer Science Camp by Society for the Popularization of Science — May 2017

Competitions Attended

Datathon 2.0 by Robi Axiata Ltd. — Dec. 2023

Google Summer of Code — 2021 - 2023

Iranian Geometry Olympiad — 2019 - 2020

Intra University Programming Contest by Brac University — Spring'2019

Participated in Mathematical Olympiad in National Round — 2014 - 2018

Participated in Physics Olympiad in Regional Round — 2016 - 2018

Participated in Biology Olympiad in National Round — 2017 - 2018

True Festival 1.0 (Photography Competition) by Viqarunnisa School — Mar. 2015

Online Courses

Human Computer Interaction - Theory & Principals (View Certificate) ↗ — Udemy

Human-Centered Design: an Introduction (View Certificate) ↗ — Coursera

Introduction to Augmented Reality and ARCore (View Certificate) ↗︎   Coursera

Research Ethics and Compliance Training (View Certificate) ↗︎   Western Washington
University