

Syed Zuhair Hossain

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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 Notable Coursework: Human Computer Interface, Neural Networks, Artificial Intelligence, Software Engineering, Introduction to Robotics.	Dhaka, Bangladesh Jan. 2019 to May 2023
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 Katelyn Pryor, Thorleif Coleman, Syed Zuhair Hossain , Eric Tootill, Shameem Ahmed, COMPSAC 2025: IEEE International Conference on Computers, Software, & Applications	July 2025 COMPSAC 2025 Read Paper
MonChitro: Unveiling The Stress and Depression About Future Among Undergraduate Students Syed Zuhair Hossain , Anika Tahsin Miami, Jannatun Noor Mukta NSysS'24: 11th International Conference on Networking, Systems and Security 2024	Dec. 2024 NSysS'24 Read paper

Poster Publications

NavConnect: Empowering Boatmen Through USSD-based Transportation Services Syed Zuhair Hossain , Anika Tahsin Miami HOTMOBILE '24: Proceedings of the 25th International Workshop on Mobile Computing Systems and Applications	Feb. 2024 HOTMOBILE '24 Read Poster Paper
Psychological Aspects and Potential Screening of Depression Among Cancer Patients Anika Tahsin Miami, Anika Priodorshinee Mrittika, Syed Zuhair Hossain , Jannatun Noor Mukta NSysS'23: 10th International Conference on Networking, Systems and Security 2023	Dec. 2023 NSysS'23 Read Poster

Undergrad Thesis

Beyond words: an exploration of free-hand sketches and EEG-based neurobiological signatures to unveil the underlying depression among cancer patients Anika Tahsin Miami, Anika Priodorshinee Mrittika, Syed Zuhair Hossain , Jannatun Noor Mukta	April 2023 Brac University Read Paper
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Research Grant

Research Seed Grant Initiative 2023

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

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

July 2023
Brac University

Research Work Experience

Empathetic Computing Lab, *Virtual Internship*

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

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

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

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

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

NSUHCI DIAL, *Undergrad Data Science Research Assistant*

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

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

Professional Work Experience

Brac University, Instructor, App Development

- 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.

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

RedDot Digital IT Ltd., Assistant DevOps Engineer

- 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.

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

RedDot Digital IT Ltd., Trainee DevOps Engineer

- 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.

Dhaka, Bangladesh
June 2023 to Jan. 2024
7 months

RedDot Digital IT Ltd., DevOps Engineer, Intern

- 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.

Dhaka, Bangladesh
Feb. 2023 to May 2023
7 months

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

Data Analysis Tools : Jupyter Notebook/Google Colab, Kaggle, Microsoft Power BI

Graphics Design Software : 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 open-source 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 ([Workshop Info](#)) 

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, Playing Piano, 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