

# 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

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

## Work Experience

<b>NEAT (Next Generation Effective Affective Technology)</b> , Remote Research Assistant • Mental health analysis of neurodivergent individuals, focusing on identifying patterns and developing strategies for improved well-being.	Western Washington University, USA June. 2024 to <b>Present</b> 2 months
<b>Brac University</b> , 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 <b>Present</b> 2 years and 11 months
<b>RedDot Digital IT Ltd.</b> , 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 <b>Present</b> 6 months
<b>RedDot Digital IT Ltd.</b> , 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

**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

**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

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**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

## Poster Publications

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**NavConnect: Empowering Boatmen Through USSD-based Transportation Services**

**Syed Zuhair Hossain,** Anika Tahsin Miami

[10.1145/3638550.3643630](https://doi.org/10.1145/3638550.3643630) 

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

Feb. 2024  
HOTMOBILE '24

**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

## Undergrad Thesis

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**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](#) 

## Research Grant

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**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

## Conference Reviewer

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**Association of Computing Machinery (CHI'24):** 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

## Projects

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**A Text-Based Healthcare Chatbot to Support Patients**

- 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.

2023  
[\(Project Demo\)](#) 

**Analyzing Maternal Health in Nigeria using Machine Learning**

- 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.

2023

**BracU Faculty Info**

- 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.

2022

**ROBUST**

- 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.

2020 to 2021

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

- 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.

2021

## 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

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<b>Institute of Electrical and Electronics Engineers (IEEE)</b> , Student Member	Jan. 2021 to Present
<b>Association for Computing Machinery (ACM)</b> , Student Member	Nov. 2023 to Present
<b>Special Interest Group on Computer-Human Interaction (SIGCHI)</b> , Student Member	Nov. 2023 to Present

## Voluntary Leadership Roles

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<b>Society for the Popularization of Science</b> , Volunteer & Organizer	Oct. 2021 to Present
<b>BRAC University ACM Student Chapter</b> , Mentor	Sept. 2021 to May. 2023
<b>Robotics Club of Brac University</b> , Director, Human Resource Department	Apr. 2022 to Mar. 2023
<b>Bangladesh Junior Science Olympiad</b> , Organizer	Dec. 2022 - Mar. 2023
<b>Brac University Computer Club</b> , Assistant Director, Creative Department	Jan. 2022 - Dec 2022
<b>Bangladesh Mathematical Olympiad</b> , Volunteer & Organizer	Jan. 2020 - Dec 2021
<b>Dhaka City College Photography Club</b> , Founder President	Jul. 2017 - Aug. 2018
<b>Dhaka City College Science Club</b> , Head of Photography	Jul. 2017 - Aug. 2018
<b>Ideal Science and Technology Aiming Research Council-ISTARC</b> , Panel Member	May. 2015 - Apr. 2016

## Recreational Activities

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

## Professional Courses

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<b>BASIS &amp; Skills for Employment Investment Program (SEIP):</b> Mobile Application Development Course using Flutter	Oct. 2021 - Apr. 2022
<b>British Council:</b> Senior Young Learners, Upper-Intermediate (B2) Level Course	Apr. 2016 - May 2016

## Workshops/Bootcamp

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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

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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

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Human Computer Interaction - Theory & Principals ( <a href="#">View Certificate</a> ) 	Udemy
Human-Centered Design: an Introduction ( <a href="#">View Certificate</a> ) 	Coursera
Introduction to Augmented Reality and ARCore ( <a href="#">View Certificate</a> ) 	Coursera