## **MD. AKRAM HOSSAIN**

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**Career Objective:** As a dedicated and research-oriented civil engineer, desire to secure a position to apply my knowledge of engineering, i.e., structural analysis, design, and construction while contributing towards organizational progress.

**Career Summary:** Research oriented, dedicated Structural Engineer passionate about pushing the boundaries of design and engineering. Experienced in the Curtain wall (Façade) sector. Have sound knowledge of Structural analysis and design of Steel and Aluminum structures. Familiar with different international building codes namely ASTM, ASCE, ACI, BNBC, and BS Code. Have excellent knowledge of Microsoft Office suite (Word, Excel, PowerPoint, MS Project), AutoCAD 2D, Adobe products, and Structural analysis and design software like ETABS, Staad.pro, SAP2000 etc.

#### **PROFESSIONAL EXPERIENCE**

## Structural Engineer,

Arman Engineering Ltd., Islam Tower 4th floor, DIT road, Rampura, Dhaka, Bangladesh

- **Responsibilities**
- Structural Analysis and Design of Curtain wall Façade system, Steel and Aluminum structure
- Supervision of Façade work
- Document & Reports tracking

#### **Projects**

- o BRAC University New Campus, Dhaka
- o Suvastu Skyline Avenue, Dhaka
- o World Trade Center, Chittagong
- o AristroPharma Limited, Dhaka
- o Trade Inter-Continental (TIC), Dhaka
- o Simpletree GSR, Dhaka
- Taj & Vivanta Hotel, Dhaka
- o Bengal Hotel and Resort, Dhaka

## Jr. Structural Engineer,

Naf Tourism Park Project, Teknaf, Bangladesh (worked from home due to corona pandemic)

Responsibilities,

- Structural modeling and analysis of Station-B
- Reports and document tracking

## ACADEMIC CREDENTIALS

٠	BSc. in Civil Engineering,	March, 2016 – September, 2021
	Chittagong University of Engineering and Technology (CUET)	
	Chattoram-4349, Bangladesh	
	Major: Structural Engineering	
	Minor: Environmental Engineering	
	CGPA: 3.23/4.00	
•	Higher Secondary School Certificate (HSC),	2013 - 2015
	Feni Government College	
	Feni, Bangladesh	
	GPA: 5.00/5.00	
•	Secondary School Certificate (SSC),	2008 - 2013
	Nizkunjara High School	
	Feni, Bangladesh	
	GPA: 5.00/5.00	



March, 2022 – Present

July, 2021 - Sept, 2021

#### TRAINING SUMMARY

## Industrial Training,

Nov, 2019 - Dec, 2019

34 Engineer Construction Brigade, Dampara, Chattogram, Bangladesh

- Visited the Patenga Container Terminal Project, and observed the Jetty and flyover construction
- Visited the 'Re-excavation, expansion, renovation & development of canal for mitigating water logging problems in Chattogram city' project and the 'Riverbank Protection on Halda River' project
- Learned cost-of-material estimation, report, and document tracking, project documentation, tender document preparation, etc.
- Cultivated an excellent relationship throughout the assigned territory

#### **TECHNICAL SKILLS**

Engineering Software:	• SAP2000 (Excellent proficiency. Structural modeling and analysis of curtain wall system, aluminum and steel structure. Irregular aluminum profiles are considered as idealized regular section keeping the moment of inertia same, as there is option to design the irregular section in SAP2000. Most of the time aluminum is needed to be designed by using hand calculation as per AA ADM 2015. For steel structure, connection and support type, unbraced length, LTB deserves special attention.)
	• ETABS (Intermediate proficiency. Structural modeling of high-rise building, applying manually calculated and automated loads; wind load, earthquake load. Analyze the structure. Finding internal forces and design all structural components like beam, column, slab, shear wall either by hand calculation of ETABS automation.)
	• <b>STAAD Pro</b> (Intermediate proficiency. Most of the time, I use SAP2000 instead of Staad Pro. Although the UI seems not very intuitive, but for steel design, I have found excellent result by using Staad Pro.)
	• <b>IdeaStatica</b> (Excellent proficiency. I have designed most of steel connection by using IdeaStatica. Cross verified the design result by hand calculation as pe BNBC and ACI guideline of anchor design. As there is no way to design the post-installed anchor in this software, I design post-installed anchor by hand calculation.)
	<ul> <li>RFEM (Basic proficiency. Mostly used to design the structural glass for curtain wall. Shows very consistent result with ASTM E1300 guideline. For second order large deflection analysis, and to consider temperature effect in Insulated glass, RFEM shows excellent result.)</li> <li>Portfolio Link: https://akramh.com/portfolio/</li> </ul>
Drafting Software:	• <b>Tekla Structure</b> (Basic proficiency. For steel connection details and drafting, I have used Tekla Structure. As in façade industry, the steel works are not very much, therefore, I didn't have the opportunity to use this software frequently.)
	• AutoCAD (Intermediate proficiency. Prepared small scale steel fabrication drawing, connection details and drafting. Also used to determine section properties of irregular section and various measurement.)
Office Software:	• <b>Microsoft Word</b> (Excellent proficiency. Preparing report, technical paper using proper heading style, automatic table of content, references and other automations.)
	• <b>Microsoft Excel</b> (Intermediate proficiency. Preparing BoQ, advance formula, Pivot table, graph plotting and data analysis, report making in efficient way.)
	• <b>Microsoft PowerPoint</b> (Excellent proficiency. Business presentation, design presentation, template making using slide master)

Programming language:	• <b>Python</b> (Basic proficiency. Familiar with Pandas, NumPy, Matplotlib library. Determined moment of inertia of irregular section by using python. Made a small software to determine gust effect factor of flexible structure for wind load. Also used to train neural network model to interpret concrete strength for my thesis and publication.)	
	• MATLAB (Basic proficiency. Graph plotting, data visualization, Neutral network toolbox, curve fitting etc.)	
Graphic & Video Editing:	<ul> <li>Adobe Photoshop (Basic proficiency. Photo manipulation, color correction etc.)</li> <li>Adobe Illustrator (Basic proficiency. Poster and logo making)</li> <li>Adobe Premier Pro (Basic video editing.)</li> <li>Camtasia (Video editing, annotation, screen recording and tutorial making.)</li> </ul>	
Other:	<ul> <li>Linux (Debian, Ubuntu, Mint distro.)</li> <li>Windows OS</li> </ul>	

## **OTHER SKILLS**

- Good time management
- Good interpersonal communication skills
- Ability to take challenges
- Can work under pressure
- Work effectively both individually and teamwork
- Good presentation skills

#### **RESEARCH EXPERIENCE**

#### **Undergraduate Research Work**

May, 2021 – August, 2021

Chittagong University of Engineering and Technology (CUET), Chattogram, Bangladesh Worked on the prediction of concrete strength using artificial neural networks (ANN). Some data is taken from our lab by concrete test which is used for validation while most of the data utilized in this study to train the model was from different authors.

**Thesis title:** "Compressive Strength Prediction of Self-Compacting Concrete Using Artificial Neural Networks" Research Supervisor: Prof. Dr. G. M. Sadiqul Islam

## JOURNAL PUBLICATIONS

 Md Akram Hossain, Islam, G. M. S., & Amit Mallick. (2022). Compressive Strength Prediction for Industrial Waste-Based SCC Using Artificial Neural Network. *Journal of the Civil Engineering Forum*, 9(1), 11-26. https://doi.org/10.22146/jcef.4094

# ACHIEVEMENT

 Participated and achieved 2<sup>nd</sup> runner-up prize at the ACI Concrete Project Competition 2022, organized by the American Concrete Institute (ACI). https://www.concrete.org/students/studentcompetitions/concreteprojectscompetition/concreteprojectspastwi nners.aspx

#### AFFILIATIONS

- o Associate Member of Institute of Engineers, Bangladesh (IEB), Membership ID: A-26033
- Member of American Concrete Institute (ACI), Member ID: 1609603

## **EXTRA-CURRICULAR ACTIVITIES AND OTHER CREDENTIALS**

- Board Scholarship at JSC, SSC, HSC Exam by Bangladesh Govt.
- Industrial Training at 34 Engineer Construction Brigade
- Honorary Award from Deputy Commissioner for HSC exam result
- Executive member, CUET Debating Society
- Executive member, CUET Career Club
- ICT Editor, Notun Kuri Songha (Sporting and Social Club)
- Captain, Local cricket team (two times tournament champion)
- Volunteer works, CUET Debating Society annual program

#### LINGUISTIC PROFICIENCY

- English (Fluent Working Proficiency)
- **Bengali** (Native Language)

#### **EXTERNAL LINKS**

- Personal website: https://akramh.com/
- LinkedIn: https://www.linkedin.com/in/ahshuvro/
- ResearchGate: https://www.researchgate.net/profile/Md-Akram-Hossain-9
- ORCID: https://orcid.org/0000-0002-7688-1209

#### ACKNOWLEDGMENT

I hereby declare that the information provided is true and correct. I also understand that any willful dishonesty may render for refusal of this application or immediate termination of employment.

#### REFERENCES

**Dr. G.M. Sadiqul Islam** (Project Supervisor) Professor, Dept. of Civil Engineering, CUET Mobile: +8801713018513 Email: gmsislam@cuet.ac.bd

## Dr. Muhammad Abdur Rahman Bhuiyan

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