

# Tabassum Mushtary Meem

MASc STUDENT IN CONSTRUCTION ENGINEERING

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## Research Interest

- Clash avoidance in BIM based design coordination using machine learning.
- Developing rule based sequential recommendation system for assistance during BIM model creation.
- Application of machine learning for design optimization.

## Education

### École de technologie supérieure (ETS)

Montreal, Canada

MASc, CONSTRUCTION ENGINEERING, GPA: 3.93/4.3

2021-Present

- **Research focus:** Developing a rule based system for automating hard clash avoidance in Building Information Modelling (BIM) based multidisciplinary design coordination.
- **Graduate Courses (Replacement credits from Concordia University):** Big data analytics and AI for smart city infrastructure, Building Information Modelling in Construction, Sustainable Construction Planning and Control.

### Bangladesh University of Engineering and Technology

Dhaka, Bangladesh

BACHELOR OF ARCHITECTURE

2011-2017

- **Thesis:** *Life With the Sea:* Kuakata Marine Fisheries Institute, Kuakata
- **Achievement:** Formulated a program that addresses sustainability issues in highly natural disaster prone areas in tropical climate. The flexible modular design of the premise acts seamlessly as an emergency shelter for the local community during natural calamities.

### Bir Sreshtha Noor Mohammad Rifles Public School and College

Dhaka, Bangladesh

HIGHER SECONDARY SCHOOL CERTIFICATE (SCIENCE), GPA: 5.00/5.00

2008-2010

### Srijanee Bidyaniketan

Barishal, Bangladesh

SECONDARY SCHOOL CERTIFICATE, GPA: 5.00/5.00

2008

## Awards and Scholarships

- Award received from PyCon Japan, to present the work on using machine learning algorithms for determining LEED building efficiency.
- Winner- Three Minute Thesis Competition 2022 (poster) organized by AACE, Montreal section.
- Secured 10<sup>th</sup> place in national board Secondary School Certification Examination (SSC).
- Recipient of the talent pool scholarship from the national education board.
- Recipient of the talent pool scholarship in primary and junior scholarships examinations.

## Publications

- **Tabassum Mushtray Meem**, Ivanka Iordanova "Overcoming obstacles in BIM-based Multidisciplinary Coordination: A Literature Overview", In Proceedings of Canadian Society of Civil Engineers (CSCE) 2022, Whistler, British Columbia.
- **Tabassum Mushtray Meem**, Ivanka Iordanova "Clash Avoidance in BIM-based Multidisciplinary Coordination: A Literature Overview", Creative Construction Conference (CCC 2022).

## Work Experience

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### Insignia Studio

*Dhaka, Bangladesh*

BIM ARCHITECT

*May 2017 - 2019*

- Worked as a BIM coordinator on affiliated commercial projects lead by Oneworks, a global design consultancy firm.
- Collaborated with architectural, MEP and structural disciplines to create federated BIM model. In charge of leading technical BIM coordination meetings to resolve architectural and structural clashes.
- Performed preliminary study of the project's site and features. Created detailed BIM models and visualization for architectural disciplines.
- Prepared scoping documents, construction drawings and detailed packages for residential, academic and industrial projects for RAJUK (Capital Development Authority) certification and managed on site issues.
- Studied building heat gain and ventilations via performance analysis software during design phase for design optimization.

### Shajgoj Limited

*Dhaka, Bangladesh*

PART TIME CONTENT PRODUCER

*Oct 2015 - 2019*

- Developed a high performing creative team to successfully execute digital campaigns for multinational enterprise including, Loreal, Reckitt Benckiser, Marico and Unilever.
- Lead a graphics design and editing team for the marketing campaign of international brands.

### Sthanik Architectural Consultant

*Dhaka, Bangladesh*

DESIGNER

*Jan 2017- Mar 2017*

- Preliminary project site and feasibility study.
- Prepared construction details and specifications.
- In charge of site supervision and construction for multiple interior design projects.

### Insignia Studio

*Dhaka, Bangladesh*

INTERN (BIM COORDINATION)

*Aug 2015- Dec 2015*

- Performed comprehensive planning, place making and visualization of outdoor urban space.
- Assisted senior BIM coordinator in model creation and federated model generation.
- Participated in BIM coordination meetings and prepared BIM execution plan documents.
- Worked on 3D visualization of multiple government master plans and commercial projects.
- Lead a design team to participate in DESCO Head office design competition.

## Competition

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### Unstoppable schooling, continuing education with disaster.

*Khulna, Bangladesh*

ARCHITECTURE DISCIPLINE, KHULNA UNIVERSITY

*2012*

Conceptualized sustainable floating structures that can work as an educational institution during natural calamities which are common in the coastal regions of Bangladesh.

### Designing Resilience in Asia, 2015.

*Singapore*

NATIONAL UNIVERSITY OF SINGAPORE

*2015*

Participated in the international design competition arranged by School of Design and Environment, National University of Singapore. The proposed design focused on resilient structure that can support and protect the community during flash flood.

### Dezeen X MINI Living Future Urban Home.

*Dhaka, Bangladesh*

*2015*

Conceptualized urban fishermen community in a futuristic submerged city of Dhaka.

## Exhibitions and Workshops ---

**Data-driven approach to analysis the efficacy of LEED certified buildings using python.**  
PYCON JAPAN

Tokyo, Japan  
2022

**Inter university design collaboration**  
BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY

Dhaka, Bangladesh  
2015

Participated in an interactive workshop on urban design conducted by the Architecture discipline of Kyushu university, Japan. Conceptualized a master plan that is economically and environmentally friendly and devised sustainable guidelines for historical Dhaka urban fabric.

## Software Skills ---

<b>Computer Aided Drawing</b>	Autocad
<b>Modeling and Rendering</b>	Autodesk Revit, Rhinoceros 3D, Grasshopper 3D, Podium, Lumion, Vray, Sketch up
<b>BIM Collaboration</b>	BIM Track, Autodesk construction cloud
<b>Scheduling and workflow simulation</b>	Autodesk Navisworks
<b>Image post processing</b>	Adobe Photoshop
<b>Video post processing</b>	Adobe Premier Pro, VSDC, Windows movie maker
<b>Animation</b>	Lumion
<b>Vector Graphics Editor</b>	Adobe illustrator, Corel Draw
<b>Writing</b>	Adobe InDesign
<b>Programming Language</b>	Python, HTML, CSS
<b>Data analytics</b>	RapidMiner, NVivo

## References ---

Available upon request.