

## OMAR SAIF

Mechanical Engineer with three years of experience in mechanical design, manufacturing and numerical modeling. Certified associate designer with 200+ individual design and development projects between two different companies. Currently seeking a PhD position in mechanical engineering.

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### Work Experience

#### Research Associate

Dhaka, BD | Apr, 2024 – June, 2025

*Participatory Management ID*

- Data Analyst
- Field Research Correspondent

#### Sr. Deputy Assistant Director

Dhaka, BD | Oct, 2021 – May, 2022

*Walton Hi-Tech Industries PLC*

- Structural Designer, VRF Outdoor Units
- Model Manager, FCU and ERV Units
- Fair and Exhibition Coordinator

#### Jr. Mechanical Engineer

Dhaka, BD | May, 2019 – Sep, 2021

*Brightbirds Bedrijfsbureau (NL)*

- Designer, Heavy Machineries and Accessories
- Research Assistant

### Technical Skills

#### Mechanical Design and Analysis

- SolidWorks
- Autodesk Inventor
- AutoCAD
- ANSYS

#### Miscellaneous

- Python
- Keyshot
- FARO Scene
- C++

### Notable Project

#### Reverse Engineering of Legacy Pipe-Bending Die using Point-Cloud Data [Brightbirds Bedrijfsbureau]

Dhaka, BD | 2021

- Led the digital reconstruction of a 25-year-old pipe-bending die with no existing CAD model, preventing major production downtime and replacement costs
- Proposed and implemented LiDAR scanning (Leica BLK360) to capture broken die geometry, pioneering point-cloud-based reverse engineering at the facility
- Developed a hybrid workflow using Meshmixer, Fusion 360, and Autodesk Inventor to process and reconstruct high-density scan data into manufacturable 3D models.
- Overcame incomplete and damaged geometry through creative parametric modeling and multi-software data stitching.
- Delivered a validated digital blueprint that restored full production capability and established a reusable workflow for future legacy-part reconstructions.
- Saved the company several thousand euros in replacement and downtime costs

### Education

#### Bachelor of Science in Mechanical Engineering

Dhaka, BD | 2013 – 2019

*Ahsanullah University of Science and Technology*

Majors Included – Fluid Mechanics, Machine Design, Composites, Thermodynamics, Mechatronics, Heat and Mass Transfer, Numerical Analysis.

#### Higher Secondary School Certificate

Dhaka, BD | 2010 – 2012

*Notre Dame College*

Major – Science

**Secondary School Certificate**  
Dhaka Residential Model College  
Major – Science

Dhaka, BD | 2008 – 2010

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**Undergraduate Thesis**    **Comparison of Lift & Drag of Different Bird Wings by Numerical Analysis**    Dhaka, BD | 2018 – 2019

- Conducted CFD analysis comparing bio-inspired and conventional straight wings across multiple angles of attack
- Evaluated lift, drag, and other parameters to assess aerodynamic efficiency
- Found bio-inspired design offered higher lift and better high-angle performance, highlighting applications in maneuverability

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**Notable Certificates**

<b>Certified SolidWorks Associate, Mechanical Design</b> <i>Dassault Systems</i>	Jul, 2021
<b>Innovation through Design: Think, Make, Break, Repeat</b> <i>The University of Sydney</i>	Jan, 2021
<b>Python for Beginners</b> <i>Udemy Academy</i>	Feb, 2021
<b>Flow over an Airfoil</b> <i>ANSYS</i>	Dec, 2023

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**Hobbies**



Books



Chess



e-Sport



Photography