MD. AJWAD MOHIMIN

Halishahar, Chittagong   github.com/ajwadmohimin
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EDUCATION

Chittagong University of Engineering and Technology   *2018-Present*
B.S. in Mechanical Engineering
Member of ASME
Member of IEEE
Overall CGPA: 3.66/4 (results published upto level-3)

Chittagong College   *2015-2017*
Higher Secondary Certificate
Chittagong Board
Overall GPA: 5/5

RESEARCH INTERESTS

- Computational Fluid Dynamics of complex fluid systems including Biological Flows

- Machine learning and data science for modeling of fluid flow phenomena

- Data-driven turbulence modeling

RESEARCH EXPERIENCE

Hemodynamics in intracranial aneurysm: a computational study
Undergraduate thesis   *Supervisor: Dr. Prasanjit Das*

· Patient-specific aneurysm models will be generated from medical images.
· Pulsatile velocity profile will be implemented in the cfd solver.
· Hemodynamics will be examined for both non-stented and stented aneurysm models imposing realistic boundary conditions.
· A novel stent design is expected to be formed.

CFD Simulation of Pulsatile Blood Flow through Arterial Stenosis of Different Severities
Undergraduate Research Volunteer
Dec 2022-Present   *PI: Dr. Prasanjit Das*

· Developement of a CFD model to analyze the hemodynamics in arterial stenosis.

PROJECTS

- Implementation of Womersly inlet velocity profile in OpenFOAM.

- Bird photo identification using ResNet18.

- Python coded cam profile generator.

- Large eddy simulation of transitional flow past a cylinder.

- Flow over a simplified car body: a CFD validation study.

TECHNICAL STRENGTHS

Programming Languages	Python, C/C++, Matlab, Julia & LaTeX
Software Packages	OpenFOAM, OnShape, Solidworks, Ansys(Fluent), Blender

ONLINE COURSES

- Data Scientist with Python Track, *Datacamp*   2022-Present
- Computer Vision, *Kaggle*   Completed, 2021
- Intro to Deep Learning, *Kaggle*   Completed, 2021
- Intermediate Machine Learning, *Kaggle*   Completed, 2021

CERTIFICATION

Certified Solidworks Professional   2021
Dassault Systèmes
Certificate no.: C-XHA3GTFKJ6

AWARDS & HONORS

- **Research & Innovation Technology Competition**   2021
  Silver Award
  Universiti Tun Hussein Onn Malaysia, Johor

- **NextScholar 1.0 - Article Writing Competition**   2021
  Article: ***Biofuel: A Renewable Alternative of Fossil Fuel***
  Placed among top 10 articles
  CUET CSME Student Chapter, CUET, Bangladesh

- **ANSYS Simulation Competition**   2020
  1st Runner Up
  CUET CSME Student Chapter, CUET, Bangladesh

- **Board Scholarship**   2013-2022
  Chittagong Board, Bangladesh

VOLUNTARY CONTRIBUTIONS

- **Solidworks trainer**, CUET CAD Society   2020
- **Social Media and Publicity Coordinator**, IEEE Student Branch CUET   2020
- **Photographer**, HULT Prize at CUET   2019

PUBLICATIONS

[1] Arnab Das, Adittya Barua, Md Ajwad Mohimin, Jainal Abedin, Mayeen Uddin Khandaker, and Kholoud S. Al-Mugren. Development of a novel design and subsequent fabrication of an automated touchless hand sanitizer dispenser to reduce the spread of contagious diseases. *Healthcare (Switzerland)*, 9(4), 2021.

[2] Arnab Das, Md. Ajwad Mohimin, Adittya Barua, Moin Uddin, Ahmed Babar, and Moham Ed Abdur Razzaq. Numerical Investigation of Plate-fin Heat Exchanger with Wavy Channel and Wavy Vortex-generator Channel. In *International Conference on Mechanical, Industrial and Energy Engineering 2020*, Khulna, Bangladesh, 2020.