MD HEDAYETUL ISLAM CHY

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EDUCATION

- **University of Chittagong**, Chittagong, Bangladesh
  Master of Science, Electrical & Electronic Engineering 2022 - 2024
  CGPA: 3.59/4.00
- **University of Chittagong** Chittagong, Bangladesh
  Bachelor of Science, Electrical & Electronic Engineering 2017 - 2022
  CGPA: 3.36/4.00
- ***IELTS Academic Overall: 6.5***

EXPERIENCE

ICT Division, *Research Fellow* — Dhaka, Bangladesh

- Explored bio-inspired design principles and adeptly mimicked these concepts utilizing computational simulation tools, fostering innovation in engineering solutions.
- Investigated the use of resin materials for micro and nano-scale fabrication using 3D printing technology, advancing precision manufacturing techniques.

UprintBD, *R&D Engineer* — Chittagong Bangladesh

- Reconfigured printing devices and spearheaded the development of a dynamic mobile application and server infrastructure to optimize cloud printing services, enhancing efficiency and accessibility.
- Pioneered the development of a versatile infrastructure enabling operation through WhatsApp, complementing existing mobile and web applications, and expanding user accessibility and convenience.

PUBLICATION

- **Md Hedayetul Islam Chy**, Riya Biswas, Md Fazlul Kader, Yuan Wan, Mohammed Arif Iftakher Mahmood, *"Design optimization of anti-splashing targets and simulation of droplet impact on it."* - Physics of Fluids, 36(1).

THESIS AND PROJECTS

Design, Fabrication and Performance Analysis of Anti-splashing Surface Jan 2022 - Feb 2024

- Conceptualized and designed 3D printed surfaces aimed at mitigating fluid splashing, employing advanced CAD techniques to optimize performance.
- Utilized Ansys Fluent software to conduct comprehensive simulations, employing the Volume of Fluid (VoF) method for precise Computational Fluid Dynamics (CFD) optimization.
- Spearheaded the development of a structured model, rigorously tested and validated, showcasing an outstanding effectiveness improvement of more than 65% compared to conventional flat surface models.

Centralized Covid-19 ICU Monitoring Aug 2020 - Mar 2021

- Engineered a comprehensive system enabling real-time monitoring of patients' bedside displays from non-COVID areas, ensuring swift and efficient healthcare management.
- Developed a sophisticated Python Wrapper incorporating advanced image processing and character recognition algorithms, optimizing data extraction and analysis capabilities.
- Implemented Esp-32 camera technology for seamless image capture and transmission using TCP/IP protocol, enhancing data accessibility and reliability.

- Facilitated seamless integration of a user-friendly cross-platform application, improving collaboration among medical personnel and streamlining communication with the server.

Speaker Design from scratch July 2018 - Jan 2019

- Delved into the nuanced characteristics of diverse transistors such as JFET, MOSFET, and BJT, mastering their operational intricacies.
- Engineered circuitry with ingenuity, achieving over 50-fold amplification, showcasing adeptness in circuit design and optimization.
- Demonstrated creativity and resourcefulness by crafting a high-quality PCB using DipTrace, innovatively fashioning it solely with household accessories, showcasing a unique blend of technical proficiency and craftsmanship.

AWARDS

- **National ICT Fellowship, 2023**
  Awarded by the Government of the People's Republic of Bangladesh, to support research in the field of bio-surface.
- **Runner-up, Startup Idea Competition, EEE Fest, University of Chittagong, 2022**
  Title: Distributed Cloud Printing Service
- **One of the top three team selected for National Hackathon 2019**
  Title: AI and ML recognized stereo camera for Occupational Health and Safety.

TECHNICAL SKILLS

Electrical & Mechanical	PSpice, Proteus, Diptrace, Solidworks3D, Ansys Fluent
Coding	Python, MATLAB, C++, Javascript, Git, Dart, Latex
Microcontrollers	Raspberry pi, Esp32-cam, TTGO camera plus, Arduino
ML/DL	Tensorflow, Keras, Scikit-Learn
Web server & OS	Flask, Django, UbuntuOS, KaliOS, Raspbian
Others	Flutter, Illustrator, Virtual machine, Docker etc.