MD HEDAYETUL ISLAM CHY

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I am an electrical engineer with a specialization in embedded systems, bio-surface modeling, medical image processing and machine learning. Currently, I'm fully captivating in the fields of medical image analysis, noninvasive medical technology and biomedical engineering, where I harness my expertise to drive innovation and make a positive impact.

ACADEMIC CREDENTIALS

Master of Electrical and Electronic Engineering, University of Chittagong — Running
Bachelor of Electrical and Electronic Engineering, University of Chittagong — 2017 - 2021
CGPA: 3.36/4.00

THESIS AND PROJECT

Design optimization of micro-scale anti-splashing 3D targets — Nov 2021 - June 2023

- Designed 3D printed surfaces to reduce fluid splashing and investigated simulations through Ansys Fluent.
- Applying different CFD methods such as Volume of Fluid, Eulerian method etc.
- Optimized various parameters and analyzed the structure with materials such as SLA-resin and PDMS.

Covid-19 ICU Monitoring — Aug 2020 - Mar 2021

- A system that assists hospital personnel in real-time monitoring of patients' bedside displays from a non-covid space. Experienced how a project becomes a product.
- Developed a Python Wrapper for conducting image processing and character recognition algorithms.
- Esp-32 camera for capturing image and send using TCP/IP protocol.
- Devised an cross-platform application that maintain communication with server.

PUBLICATIONS

- **Design optimization of anti-splashing targets and simulation of droplet impact on it** (accepted)
  Physics of Fluids - AIP Publishing LLC — 24 Dec,2023

AWARD AND TRAINING

- ICT Division Fellowship, awarded by the Government of the People's Republic of Bangladesh, to support research in the field of bio-surface, 2022
- Former trainee, Ghorashal Training Center, Bangladesh Power Development Board, Palash, Narsingdi, 2021
- 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, Dart
Microcontrollers	Raspberry pi, Esp32-cam, TTGO camera plus, Arduino
ML/DL	Tensorflow, Keras, Scikit-Learn, Reinforcement Learning
Visualization	OpenCV, OriginPro, ParaView etc
Web server & OS	Flask, Django, UbuntuOS, KaliOS, Raspbian
Others	Flutter, Illustrator, Microsoft Azure services, Virtual machine, GCP, Docker etc.