

# Emam Hasan

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https://foyez-hub.github.io/F\_O\_Y\_E\_Z

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#### **EDUCATION**

# • United International University

2020-2024

Bachelor of Science in Computer Science and Engineering

United City, Madani Avenue, Dhaka 1212

- CGPA: **3.63** (124/137 credits)
- Merit-based scholarship: 50% 3 times, 25% 4 times.
- Thesis topic: Chittagonian dialect to Standard Bangla voice conversion.
- Relevant Coursework: Data Structures and Algorithms Artificial Intelligence Web Programming Basic Graph Theory Machine Learning Bioinformatics Psychology Accounting.

# PROGRAMMING CONTESTS

#### Achievements

- UIU Coders' Combat 3.0: Secured 4th place out of 200 participants | Ranklist
- 2023 ICPC Asia Dhaka Preliminary Contest: Secured 250th place out of 2600 teams | Certificate
- 2022 ICPC Asia Dhaka Preliminary Contest: Honorable Mention | Certificate
- 2021 ICPC Asia Dhaka Preliminary Contest: Honorable Mention | Certificate
- 2020 ICPC Asia Dhaka Preliminary Contest: Honorable Mention | Certificate
- SRBD Contest(2023): Qualified for Round 2 and achieved a rank of 306 out of 1500+ participants | Ranklist
- Codeforces Round 827 (Div. 4): Secured 2392th place out of 34321 participants
- CodeChef Starters 18 Division 3: Secured 119th place out of 7325 participants

# Online Judges | Stopstalk Profile

- Codechef: ehasan302 | Highest Rating: 1578 | Solved 112+ problems | Participated in 27+ contests
- Codeforces: F\_O\_Y\_E\_Z | Max Rating: Pupil, 1229 | Solved 1066+ problems | Participated in 188+ contests
- AtCoder: emam\_hasan | Max Rating: 278-Kyu | Solved 173+ problems | Participated in 36+ contests

# TECHNICAL SKILLS & INTERESTS

Languages: C, C++, PHP, Javascript, Java, HTML, CSS, SQL.

Frameworks/Developer Tools: Laravel, Bootstrap, Git and GitHub, LaTeX.

Databases: Mysql,Firebase.

Soft Skills: Problem-solving, Leadership.

Project Management Tool: Jira

Areas of Interest: Machine Learning, Bioinformatics, Natural Language Processing.

#### PROJECTS

### • Cinephiles | 🞧

April 2023

Web app for movie enthusiasts with exploration, lists, watch parties, and a vibrant community.

- Tools & technologies used: Laravel, PHP, JavaScript, Ajax, MySQL, HTML, CSS
- Led a dynamic team of **5 developers** in successfully delivering the entire project, encompassing features like movie exploration, personal lists, watch parties, friendship features, and the innovative meme contest.
- Implemented movie-themed **meme contest** feature with voting, boosting user engagement.
- Developed **user-friendly privacy** controls with customizable settings for personal lists, ensuring both enhanced user experience and robust data security.

#### • Library Automation System | 🖸

November 2022

IoT library system: RFID lockers, cloud-stored data, web display, Ultrasonic & Sound Sensors.

- Tools & technologies used: JavaScript, Ajax, Arduino Uno, Node Mcu, Firebase, HTML, CSS
- Engineered a **cloud-based** library management system leveraging **Firebase for seamless data storage**.
- Integrated **Sound Sensors** for enhanced functionality, enabling **real-time monitoring** of environmental noise.
- Designed and implemented a dynamic **website to display live data**, providing a user-friendly interface for efficient library management.
- Codewar | 🖸

A web platform enabling users to participate in **coding contests**, practice problems, and track their progress.

- Tools & Technologies Used: JavaScript, PHP, Mysql, Bootstrap, HTML, CSS
- Developed a responsive and intuitive user interface for **seamless contest participation** and problem-solving.
- Implemented server-side logic using PHP for user authentication, contest submissions, and problem solve tracking.
- Integrated a comprehensive **problem repository** for users to read, practice, and monitor their solved problems.
- Designed and implemented a user profile system showcasing a detailed list of problems solved.
- Course Management System | 😯

April 2022

A website for students to select courses, personalized recommendations, and friend-based course matching.

- Tools & technologies used: PHP, Mysql, JavaScript, HTML, CSS
- Implemented a schedule algorithm optimizing academic planning for students.
- Developed a collaborative feature for **matching courses with friends**, fostering shared learning experiences.
- Canteen Management System | 🖸

March 2021

This System enables users to browse, select, and purchase food items from three different canteens

- Tools & technologies used: Java, JavaFX
- Developed functionality to allow users to browse, select, and purchase food items from three distinct canteens within the system.
- Created a **dynamic menu display** showcasing food items and their corresponding prices, providing users with a clear overview of available options.

#### ACHIEVEMENTS

- UIU intra University AI Contest Fall 2022 | Certificate 1st place out of 100+ participants.
  - Applied **SVM** to a train.csv file with Medical Paper Abstracts for **multiclass classification** of medical condition labels, incorporating **text preprocessing** to optimize predictive accuracy.
- Microprocessors and Micro-controllers Lab Category of CSE project Show, Fall 2022 | Certificate 2nd Runner-up out of 160+ participants.
  - Created an IoT library system with  $\,$  RFID lockers , cloud storage, web display, and added features using Ultrasonic and Sound Sensors.
- System Analysis and Design Lab Category of CSE project Show, Fall 2022 | Certificate 3nd Runner-up out of 200+ participants.
  - Created a movie enthusiast web app with exploration, lists, watch parties, and a lively community.
- Received 2500 USD research grant from Institute of Advanced Research,Oct 2023 | IAR

Toward Lightweight Diabetic Retinopathy Classification: A Knowledge Distillation Approach for Resource-Constrained Settings

- A knowledge distillation-based fusion model with a lightweight 102MB student model. Achieved exceptional accuracy with 100% in binary and 99.04% in multi-class classification on the APTOS dataset, and 98.05% for binary, and 94.17% for multi-class accuracy on the IDRiD dataset. This approach holds promise for practical DR assessment in resource-constrained environments.

#### RESEARCH

## Journals

 Toward Lightweight Diabetic Retinopathy Classification: A Knowledge Distillation Approach for Resource-Constrained Settings | Paper | MDPI · Nov 16, 2023

# Conferences

- EWasteNet: A Two-Stream Data Efficient Image Transformer Approach for E-Waste Classification | **IEEE** 8th International Conference on Software Engineering and Computer System | paper | Sep 26, 2023
- Data Segmentation with Improved K-Means Clustering Algorithm|First Author| On review | 26th International Conference on Computer and Information Technology (ICCIT)