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 translation.
  - 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**
- UAP Inter-University Collaborative Programming Contest(2024): **7th** place out of **42 teams** | **Certificate** | **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**
- Leetcode : `F_O_Y_E_Z` | Solved **60**+ **problems**

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** | Github link *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** | Github link Video demo *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 |** Github link Live project *December 2023*
  *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 |** Github link Live project *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.
- **Banking App |** Github link *March 2021*
  a Java-based Bank Account Management System.
  - **Tools & technologies used:** Java
  - Built a Java-based Bank Account Management System with **diverse account types**, withdrawal constraints, and a user-friendly console interface.
  - Streamlined financial processes, providing users with a **centralized and efficient** account management solution.

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 link | **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 link | Sep 26, 2023

- Data Segmentation with Improved K-Means Clustering Algorithm| **First Author** | On review | 26th International Conference on Computer and Information Technology **(ICCIT)**