Md. Rifat Hasan **Jihan**

Code Craftsman

Middle Badda, Dhaka − 1212

📞 (+880) 1710 919 645 | ✉ mrh.jihan@gmail.com | 🌐 rhjihan.github.io | RHJihan | in rhjihan

Summary

Self-taught and highly motivated Mechanical Engineering graduate from KUET with a strong passion for software development. Developed solid programming fundamentals and a consistent track record of solving complex problems independently. Proven ability to continuously learn new technologies, adapt quickly, and tackle complex challenges.

Problem Solving

 /RHJihan/problem-solving

- **Codeforces:** Handle: RHJihan, Max Rating: 1159, 300~ problems solved
- **HackerRank:** Username: rhjihan, Problem Solving: *Gold level*, C++: *Silver level*
- **CodeChef:** Username: rhjihan, Rating: 1226
- **LeetCode:** Username: RHJihan, 160~ problems solved
- **UVa:** Username: RHJihan, 110~ problems solved
- **CodeChef:** Username: rhjihan, Rating: 1226
- **Other Platforms:** Occasionally practiced on AtCoder, SPOJ, LightOJ, CSES
- **Cumulative Experience:** Solved 800+ algorithmic problems across multiple online judges

Skills

Programming Languages	**Proficient:** C, C++, Java **Worked with:** SQL, Python, Kotlin, JavaScript, Bash
Core CS Skills	Data Structures, Algorithms, Graph Theory, Dynamic Programming, Number Theory, Problem Solving
Framework	Spring, Spring Boot, Hibernate
Database	PostgreSQL, MySQL
Web Technologies	HTML, CSS, JavaScript, REST API, Thymeleaf
Others Technologies	JPA, Maven, Gradle, MVC, Git, GNU/Linux, LaTeX
CAD & Simulation	Autodesk AutoCAD, SOLIDWORKS, Ansys, KeyShot
Languages	English (Fluent), Bengali (Native)

Projects

MonoMart   *E-commerce Backend API*

 /RHJihan/MonoMart   *Java, Spring Boot, Spring Framework, PostgreSQL, JPA/Hibernate, JWT, Swagger, Maven*

- Designed and implemented user authentication, role-based access control, product catalog, cart, and order workflows
- Engineered secure API endpoints with Spring Boot, Java, PostgreSQL, Liquibase, and Spring Security
- Optimized data handling with JPA, MapStruct, validation layers, and centralized exception management
- Integrated Swagger/OpenAPI docs, and added health monitoring endpoints

SecureFlow   *User Management System Demonstration*

 /RHJihan/SecureFlow   *Java, Spring Boot, Spring Framework, PostgreSQL, JPA/Hibernate, Thymeleaf Maven*

- Built a responsive web interface using Thymeleaf templates integrated with Spring Security for seamless authentication and role-based access control.
- Implemented robust security with Spring Security, BCrypt password hashing, JDBC authentication, session management.
- Designed and managed PostgreSQL database schema with JPA/Hibernate, and transactional data handling for users, roles, and permissions.
- Integrated Spring Boot Actuator for health monitoring, application metrics, and production-level observability.

Solarized Facebook   *Solarized Color Scheme for Facebook (Browser Extension)*

 /RHJihan/Solarized-Facebook   *JavaScript, CSS, Browser Extension APIs*

- Created a browser extension to apply a Solarized dark color scheme to Facebook.
- Enhanced user experience through consistent UI theming without affecting site functionality.

FontScope   *Web-based Font Preview and Comparison Tool*

🌐 `rhjihan.github.io/font-scope`   *JavaScript, CSS, HTML*

- Built a web tool to preview and compare multiple fonts side-by-side in real time.
- Designed a responsive and lightweight interface for designers and developers.

Open-Source Contributions

HeliBoard   *3.6k Stars*

🐙 `/Helium314/HeliBoard`   *Java, Kotlin, Android SDK*

- Contributed to HeliBoard, a customizable and privacy-conscious open-source keyboard, with a total of 29 merged pull requests.
- Implemented bug fixes, introduced new features, and enhanced Bengali language support to improve usability and accessibility.

Other Open-source Contributions

- Contributed Bengali language support to multiple open-source keyboard projects, including FlorishBoard, FUTO Keyboard, and Simple Keyboard.
- Provided localization support for KeePassXC, contributing to its multilingual interface and improving usability for non-English users.

Work Experience

10 Minute School   *Remote*

Infographic Designer   *Jan. 2023 – Dec. 2023*

- Collaborated with content writers to design high-quality academic vector graphics, diagrams, and charts that visually simplified complex concepts.
- Delivered content on schedule with consistent style across projects, enhancing educational materials through impactful visual storytelling.

Education

Khulna University of Engineering & Technology   *Khulna*

Bachelor of Science in Mechanical Engineering   *2019 – 2024*

- **Thesis:** Simulation of Autonomous Vehicle using Neural Network
  Developed a convolutional neural network based simulation model for testing the behavior of autonomous vehicles in complex traffic scenarios.

Extracurricular Activity

Team Kilo Flight

Aerodynamics Expert & Business Strategy Member   *Formula Student Racing Team of KUET*

- Designed and simulated the car's airfoil to improve aerodynamic efficiency and enhance vehicle stability.
- Managed sponsor outreach and corporate communications, establishing partnerships and maintaining coordination between the business and technical teams.

Other Volunteering Work

Student Assistant of ICMIEE 2022   *International Conference on Mechanical, Industrial & Energy Engineering*

- Coordinated conference logistics and provided operational support, ensuring seamless event execution.
- Designed and edited the official conference magazine, delivering high-quality, publication-ready content.

Organizer of IGNITION 2023   *National Mechanical Engineering Festival at KUET*

- Led the Soccer Bot, LFR, CAD Contest sections, coordinating activities, demonstrations, and team participation.
- Directed the design, editing, and publication of the festival's official magazine.
- Produced and managed digital promotional content across social media and newsletters, driving audience engagement.
- Collaborated with a team of organizers to ensure cohesive messaging and professional presentation across all festival materials.