

# Rajwan Rabby

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## EDUCATION

### National Institute of Technology Rourkela

Rourkela, India

*Bachelor of Technology in Computer Science and Engineering—CGPA:6.82/10.00(68.2 percentage) Aug,2020 – Jun,2024*

### Police Lines School and College

Rangpur, Bangladesh

*Science—GPA:5.00/5.00*

*Jun,2016 – May 2018*

## EXPERIENCE

### Summer Intern

May 2022 – Aug 2022

*NIT Rourkela*

*Rourkela, India*

- Designed an IoT-based smart home security system with face recognition using Node MCU.
- Developed a web interface for users to manage home appliances, with relay modules for high-power devices.
- Integrated a webcam to capture faces, processed by the CPU for recognition.
- Enabled notifications for unknown faces, allowing homeowners to check a live stream and activate alerts if needed.

### Undergraduate Research Assistant

May,2023 – July,2023

*NIT Rourkela*

*Rourkela, India*

- Collaborated closely with **Prof.Sujata Mohanty** to pioneer advancements in *lightweight cryptography in IoT devices*.
- Contributed to optimizing cryptographic techniques, focusing on reducing computational complexity.
- Conducted performance assessments of various cryptographic algorithms on different IoT devices.
- Measured metrics such as power consumption, memory usage, and execution time to evaluate algorithm efficiency.

## PROJECTS

### Hotel-Management-System —HTML,CSS,JavaScript,PHP

Mar,2022 – Jun,2022

- Collaborated with **Prof.Puneet Kumar Jain** to develop a comprehensive hotel management system.
- Streamlined processes like reservation, check-in/out, room availability, and billing.
- Integrated real-time reporting and analytics for data-driven decision-making and improved management.

### Smart Home with Face Recognition Security —Python,OpenCV,NumPy,MQTT,SQLite

May,2022 – Aug,2022

- Python was used as the main programming language for the project.
- OpenCV handled image processing and face recognition tasks.
- MQTT enabled real-time communication between IoT devices, while SQLite served as a lightweight database for storing user data.

### Crack Detection —Python,Image Segmentation,Feature Extraction

Sep,2023 – Dec,2023

- Implementing a Machine Learning Model using Image Processing Architecture to detect any cracks present on a wall.
- Employed edge detection and texture analysis in conjunction with computer vision techniques to improve the accuracy of crack detection.

## TECHNICAL SKILLS

**Languages:** C/C++, Python, JavaScript,

**Web Development:**HTML, CSS,Bootstrap,Tailwind, JavaScript,jQuery

**Frameworks:**Django,Node.js, WordPress,FastAPI

**Developer Tools:**Github,Git, Google Cloud Platform,Visual Studio, PyCharm

**Libraries:** Pandas, NumPy, Matplotlib

## SOFT SKILLS

Communication, Problem Solving, Teamwork, Flexibility, Leadership, Time Management

## COURSEWORK

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Data Structures and Algorithms, Software Engineering, Database Management System, Software Testing, Operating System, Object-Oriented System Design, Formal Languages and Automata Theory, Computer Organization and Architecture, Computer Networks, Discrete Structures, International Trade and Development

## CERTIFICATIONS

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### **Complete Web Development Bootcamp**

June, 2022

*Certificates://* **View Certificate**

*Instructor: Dr. Angela Yu*

### **Mastering Data Structures and Algorithms using C and C++**

March, 2024

*Certificates://* **View Certificate**

*Instructor: Abdul Bari*

## AWARDS

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Title	Description	Year
ICCR	Indian Council for Cultural Relations Scholarship	2020
Top 103	Dinajpur Board HSC Scholarship	2018
College Level	Debate Championship Award	2017
School Level	Debate Excellence Award	2013

## EXTRA CURRICULAR ACTIVITIES

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### ***National Service Scheme***

*Dec, 2020 - May, 2023*

- I have been part of the organization as a part of my academics that aim to help rural people, develop character, leadership and ideals of selfless service

### ***Cricket***

*Jan, 2021 - June 2024*

- I was the wicket keeper batsman for the official cricket team NIT Rourkela.