

# Tanvir Saklan

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Github Profile Link

Portfolio Website

## Career Objective

Hi there, I am a passionate STEM engineer who loves to work in both hardware and software divisions. With a view to sustainable green solution, I aim to integrate hardware and software for better optimization. My academic background provided me a solid knowledge about materials and various tools. I have done several nano-particle synthesis and characterization processes during my academics. On the other hand, my passion took me to the path of programming. I have crawled from design to code via a Cybersecurity path. Through which I have learned Web Development, Automation, Artificial Intelligence, and Cybersecurity.

## Education

B.Sc. in Engineering

Department : **Materials Science and Engineering**, University of Rajshahi, Bangladesh.

Passing Year : **2024** ( Jan 2019 – Dec 2024)

CGPA : **3.28** out of **4.00**

## Research Experiences

**Research Assistant at Bio and Nanotechnology Laboratory**

**Prof. Dr. Anwarul Kabir Bhuiya**

Work : Done several nanoparticle synthesis and characterization techniques for biomedical applications under his supervision. Learned to operate various complex machines such as VSM, FTIR, UV-Vis, FESEM under his supervision. Made an DIY Photocatalytic Degradation Testing Machine with co-workers in his lab.

## Research Projects

**Eco Friendly Nano-Particle Synthesis using Food Waste**

Title : *Green Synthesis & Characterization of Ferrimagnetic Nickel Ferrite Nanoparticles Using Seed Extract of Phoenix Dactylifera for Biomedical Applications.*

Contribution : Expected ferrimagnetic NPs with good particle size and magnetic properties was achieved through several low temperature operations (less than 650°C). A formal presentation was presented before the board of faculties on this research.

**Honey Synthesized Maghemite Nanoparticles for Hyperthermia Cancer Treatment**

Title : *Lychee Honey-Mediated Green Synthesis of Maghemite Nanoparticles for Potential Application in Cancer Hyperthermia Therapy.*

Contribution : Provided assistantship to my lab-mate to complete his project. Used **FESEM** & other techniques to characterize which aligns with structural analysis and sustainable material synthesis theme.

## Soft Skills

Softwares	<b>Materials Studio, Origin Pro, MS Office, Libre Office</b>
Design and Simulations	<b>AutoCAD, Adobe Illustrator, Figma</b>
Programming Languages	<b>Python, C, MatLab, PostgreSQL</b>
Scripting Languages	<b>Bash, Powershell, Linux CLI, INNO Scripting</b>

## Laboratory Skills

*Machines I can operate :* Vacuum Oven, HYSC Muffle Furnace, Magnetic Hot Plate Stirrer, Centrifuging Machine, FTIR, UV-Vis Spectroscopy, VSM, FESEM, Rockwell Hardness Testing Machine, Welding, Soldering, Lathe Machine, Photocatalytic Degradation Machine.

## Job Experiences

Prescribemate, System Developer ( July 2024 – April 2025 )

A paperless e-healthcare system designed for doctors, patients, hospitals, diagnostic centers and pharmacies under one hood. This project is built on python-django & django rest framework. An AI model was developed to handle some tasks and supercharge the platform.

Materials Science Hub, System Developer ( April 2024 – July 2024 )

A platform for enthusiast in Materials Science and Engineering. Focusing on showcasing the database of materials, creating a forum, blogs and brainstorming with AI assistant. This platform is open for all.

Kamrul Academy, Web Developer ( July 2023 – April 2024 )

An e-learning platform, has a user management system, admin panel, course showcasing, purchasing, progress tracking and automated certificate generation features.

Cambridge IT Consultancy, Software Tester Internship ( October 2021 – Jan 2022 )

An multinational B2B company, has several products on their timeline. My role was to test the vulnerability and bugs in their softwares.

Arena Web Security, Cybersecurity Internship ( April 2021 – June 2021 )

A Bangladeshi Cybersecurity Firm, offers learning materials, courses and internship after course completing successfully. I got chance into the internship program.

## Achievements

- 2024 Champion, Bangladesh Inter-University Basketball Championship Tournament
- 2023 Champion, Bangladesh Inter-University Basketball Championship Tournament
- 2022 Runners-Up, Inter-Department Football Tournament

## Hobbies

Robotics, Basketball, Football, Travelling, Gardening, Reading fictions, Karate

## References

### **Dr. Anwarul Kabir Bhuiya**

#### **Professor**

Department of Materials Science & Engineering, University of Rajshahi, Bangladesh

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### **Dr. G.M. Shafiur Rahman**

#### **Professor**

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