

EDUCATION

National Institute of Technology, Tiruchirappalli

B.Tech. in **Computer Science & Engineering**
with minor in **Management Studies**

July 2020 – Present

Expected Graduation Date: July 2024

EXPERIENCES

SAMSUNG

PRISM Virtual Intern

September 2021 – February 2022

- Created a machine learning model to generate normal maps of both front as well as the back of a human body from a single RGB image using GAN.
- Fixed the blur occlusion problem happening in PiFuHD model using OpenCV as data pre-processing resulting in an 8% better accuracy on the occluded dataset.

NITT High Performance Computing Lab

Undergraduate Research Assistant

May 2021 – December 2021

- Formulated literature survey from around 20 existing research on image forgery detection if the objects haven't undergone any nonaffine transformation.
- Inspected and tweaked existing ML models built using TensorFlow to achieve a 10% improved accuracy.

Supervisor: [Dr. M. Sridevi](#)

10 Minute School

Backend Application Developer Intern

April 2018 – August 2018

- Programmed an online compiler API for their programming hub that is being used by **1.8 million Bangladeshi students** each month to execute C/C++/Python code against given input in a sandboxed environment and return the output.
- Built load balancers, separated web server from compilation server, and implemented process queue and task scheduler in distribute codes among numerous compile servers.

SKILLS

Frameworks: PHP Codeigniter, Flutter, jQuery

Database: MySQL

Other: Git, Docker, Automatic Deployment

Miscellaneous: LaTeX, MS Office, IoT

English Language Test: IELTS (7.5/9.0)

LANGUAGES

Bengali: Native

English: C1 Advanced

Hindi: Speaking & Listening

PROJECTS

Gonitzoggo

October 2017 - Present

- Founded an online judge for mathematical problems from scratch and continuously improved and implemented new features over the last 5 years.
- Implemented Redis-based caching for faster performance and NGINX load balancing to distribute traffic among app servers. Created BASH scripts to run time-consuming tasks in the background in heavy traffic portions.
- Currently it is the largest mathematics problem-solving website in Bangladesh and has over 13K+ users and 400+ problems, and on average daily 500+ visits from users.

Website: www.gonitzoggo.com

ICPC Resolver Clone

March 2022

- ICPC Resolver is the software used by ICPC organizers to show the final runs submitted during a programming contest in an exciting way and leads up to display of the award winners.
- Original ICPC resolver is developed using Java, but this uses TypeScript. Parsed submission data from JSON and then animated the runs using Svelte framework's built-in animation.

NITT Escort

April 2022

- Developed a Flutter app to automate the entry and exit permission issuing process using QR scanning for the nonteaching staff of NIT Trichy.

HACKATHONS

Golden Jubilee IoT Hackathon

October 2021

- Ranked 5th among 350 teams by developing a cross-platform app using Flutter and an ESP-32 library using C++ for transmitting smartphone accelerometer, gyroscope, and proximity sensor data to ESP-32 micro-controller conveniently with a 60Hz transmission rate.

POSITIONS OF RESPONSIBILITY

Society for Popularization of Science, Bangladesh

Academic Team Member

January 2020 – Present

- Worked as a junior judge in the IT Project category of Children Science Congress which is the only scientific research competition in Bangladesh.
- Took workshop on scientific methodology in 12 schools.

Bangladesh Mathematical Olympiad

Academic Team Member

January 2020 – November 2021

- Curated problem set for selection and regional level competition of Bangladesh Mathematical Olympiad.