

Md Hamidur Rahman Khan

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Education

Lappeenranta, Finland

LUT University

Sept 2024 - May 2027

- **Major:** Computational Engineering, B.Sc.
- **Certificate (Minor):** Software Engineering
- **Programming Coursework:** Algorithms & Data Structures, Networks, Web Development, Artificial Intelligence, Machine Learning
- **Computational Coursework:** Linear Algebra, Matrix Decomposition, Multivariate Calculus, Probabilities & Statistics

Work Experience

Web Developer

Give Bangladesh Foundation

Sept 2023 - Present

- Collaborated internationally with Awake Youth Initiative to develop a fundraising website that supports the African underserved slum communities in Nairobi, Kenya. Website link: <https://awakeyi.org/>

Coder and Trainer

Tesla Lab

Sept 2021 - Aug 2023

- Took workshops to train 400+ individuals about integrated circuits, embedded systems, internet of things, and drones.
- Built educational Java and Python games/projects like spell checkers and pong games to reinforce the interactive programming knowledge of the students.

Activities

National Coach

World Robot Olympiad (WRO)

Jan 2023 - Dec 2023

- Successfully led a team of 3 in the Future Innovator segment through the national round, mainly focused on the robotic system, software design, hardware construction, business analysis, and technical presentation.
- Guided two national teams' participation in international competition rounds, one team achieved an impressive, first time in the history of Bangladeshi participants, 5th place out of 451 global teams at WRO '23 Panama.

President, Robotics

Notre Dame Information Technology Club

Aug 2019 - June 2021

- Mentored 45+ national robotics/project teams, and took 14 workshops along with 40+ robotics-oriented classes to train more than 150+ students in high school
- Designed a teaching module for the ICT department of my school to improve the understanding of electronics among Notre Dame College students: a combined demonstration of clock pulse generators, flip flops, registers, binary counters, and a 7-segment display on a breadboard.

Personal Projects

Tethr NETWORK TOWER POSITION OPTIMIZER USING MACHINE LEARNING

Python, C++

- An end-to-end robotic system that uses machine learning to optimize 5G network tower locations to solve the sudden loss of cellphone signal.

Block Meter BLOCKCHAIN-BASED ELECTRICITY BILLING SYSTEM

Python, C++, Solidity

- Invented an electricity billing system that eliminated non-technical losses by 100% and ensures transparency and immutability.
- Won a Silver Medal in SDG 12 national teams from 44 countries at the International Blockchain Olympiad 2022 (Hong Kong).
- Secured Bronze Medal as the youngest developer to secure top national position in the Bangladesh Blockchain Olympiad 2022.

Tinker SEMI-AUTOMATIC HUMANOID ROBOT

C++

- Built a 5-foot-tall semi-automatic multi-functional humanoid robot, including greeting guests, and carrying loads.

Spectre Bot & Spectre OS LINE FOLLOWER ROBOT WITH CUSTOM OPERATING SYSTEM

C++

- Spectre bot is a fully custom advanced line follower robot capable of achieving a maximum of 5m/s speed on track.
- Spectre OS is a custom operating system designed to provide advanced control and debugging capabilities for line follower robots.
- Secured champion position in the International Tech Carnival-DRMC 2020 with Spectre Bot.

Skills

Software

Proficient: Python • Typescript • C++ Familiar: Java • C • Javascript • PHP • Saas • R • SQL • Solidity • HTML/CSS • Matlab

Technologies

Git • Selenium • Pandas • Scikit-Learn • Next.js • React • MongoDB • Firebase • Flask • Figma

Hardware

Arduino • Raspberry Pi • Teensy • ESP-32 • STM-32 • Advanced sensors • BLDC & Geared motors