

Resume of Hafizul Imran

PERSONAL INFORMATION

Md. Hafizul Imran
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OBJECTIVE

A highly motivated and accomplished professional seeking a challenging position in robotics where I can utilize my skills, knowledge, and experience to contribute to the growth and success of the organization. With a strong background in Robotics, I aim to enhance my expertise while actively contributing to the team's objectives, fostering innovation, and achieving professional growth.

RESEARCH INTEREST

Robotics, Autonomous mobile robots, Machine Learning, Deep learning, Internet of Things (IoT), UAV, Robotic Process Automation (RPA), and Embedded Systems.

JOB EXPERIENCE

8 Years of Job Experience

January 2022 - **Senior Lecturer at Daffodil International University**

Present Key Responsibilities: Teaching, Leading, Student mentoring, Research

February 2022 - **Lab In-charge at Daffodil Robotics Lab**

Present Key Responsibilities: Team Leading, Innovation, Research and Development

July 2017-Present **Founder & Chairman of Bangladesh Robotics Foundation**

Key Responsibilities: Leading, Team management, and Community building.

January 2019 – **Project Manager (robotics) at Daffodil Computers Ltd.**

December 2021 Key Responsibilities: Project Leading, Research and development

January 2017- **Head of R&D at RITE Solutions Ltd.**

December 2018 Key Responsibilities: Research and development with robotics and IoT solutions, Leading, and Team management.

October 2015- **Research Associate (Robotics) at Daffodil International University**

December 2016 Key Responsibilities: Research and development with robotics and IoT Solutions.

RESEARCH

PROJECTS

KITI



Intro: KITI is an autonomous outdoor food delivery robot designed to deliver food and packages inside a university campus. This research project was conducted under the Daffodil Robotics Lab. [Project Video](#)

Key Technology: ROS, Autonomous navigation, Lidar SLAM, Jetson Nano, GPS, IMU, Encoder, Mapping

My Contributions: Project Lead, Robot system architecture design, hardware and software development.

RosBot



Intro: RosBot is a ROS-based mobile robot designed as a ROS learning kit. The main purpose is to develop and test ROS based algorithm within this robot [Project Video](#)

Key Technology: ROS, Indoor Autonomous navigation, Lidar SLAM, Jetson Nano, GPS, IMU, Encoder, Mapping.

My Contributions: I have designed and developed the whole project.

Robot Cruzr



Intro: Robot Cruzr is a service robot developed by UBTECH Robotics Corporation, China. I have a wide range of working experience with this robot. I have developed many service solutions using this robot, like admission counselors, guest guides, event inaugurations, etc. [Project Video](#)

Key Technology: Autonomous Indoor Navigation, Mapping, Indoor Navigation, Speech recognition, Dialog-flow.

My Contributions: Map building, System Integration, Conversation development, and Solution deployment.

Dbot



Intro: Dbot is a humanoid robot that can interact with human through voice command. It has 31 joints that help for flexible movement. Dbot was developed in 2016 and funded by Daffodil International University. [Project Video](#)

Key Technology: Voice recognition, NLP, TTS, 31 DOF, STM32F429 Discovery & Raspberry Pi 3 B+, Lightweight design.

My Contributions: The whole project was developed by me

iBOT



Intro: iBOT is an intelligent robot messenger that was developed to serve as an office assistant to deliver office items inside the office environment. This robot moves by tracing black lines with obstacle avoidance features. I developed this robot in 2018 as a part of my MSc thesis work. [Project Video](#)

Key Technology: Line following algorithm, Human-Robot-Interaction (HRI), 32-bit Processor, Obstacle detector, Color line sensing, RFID module, Buzzer.

My Contributions: Mechanical, hardware, and software development.

Resume of Hafizul Imran

Pirate

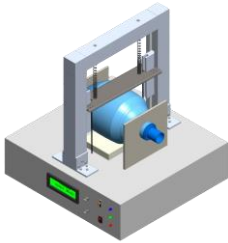


Intro: Pirate is a pipe inspection robot. The main purpose of this robot is to inspect the inside of pipelines like sewerage line, gas pipe line. The robot was developed in 2018 and participated in Startup Village 2028, Russia. [Project Video](#)

Key Technology: Raspberry Pi 3 B+, video streaming, wireless communication, flexible mechanical design.

My Contributions: Mechanical, hardware, and software development.

Nishash



Intro: Nishash is a low-cost mechanical ventilator that was developed in 2020 during the Covid-19 emergency in Bangladesh. [Project Video](#)

Key Technology: Respirator rate control, low cost, mechanical robust design.

My Contributions: Mechanical, hardware, and software development.

ACHIEVEMENT

- Got sponsorship from the South Korean government to participate in **Robotworld2022** as a robotics expert, which was held in Seoul, Korea.
- Got 50% Fund to participate in the 3rd International Conference on Advanced Robotics, Mechatronics and Artificial Intelligence 2019, Tokyo, **Japan**.
- Got 100% Fund from the Bangladesh Government to Participate in Startup Village 2018, with Pirate-Pipe inspection robot, organized by Skolkovo Foundation, **Russia**.
- Got a 100% Scholarship to complete the “**Robotics Teachers Training**” program from UBTECH Robotics Corporation, **China**.
- Got the **Championship** in the **National Hackathon 2016** that was organized by the ICT Ministry of Bangladesh.
- Earned “**Top Ten**” Position in “Smart City Hackathon-2016”, Dhaka, Bangladesh
- Got a **PhD** Fellowship from Universiti Sains Malaysia in 2022.

PROFESSIONAL TRAINING

1. Professional training on “Commercial Service Robot” from UBTECH Robotics Corporation, China. (2019).
2. Robotics teacher’s certification course from UBTECH Robotics Corporation, China. (2019).
3. Robotics Process Automation (RPA) teacher’s certification course from Uipath Academy, India. (2020).
4. Microcontroller programming from Pi-Lab (2015)
5. Industrial Technology on Electrical Engineering and Instrumentation from Training Institute for Chemical Industries (2014)

KEY SKILLS

- ROS and ROS2
- Programming Languages: C, C++, and Python.
- Simulation Software: MATLAB, Proteus, Circuit Wizard, Tinkercad
- Other Software: MikroC PRO, Arduino, keil uvision, LPC Xpresso.
- Embedded platform: Jetson Nano, Raspberry Pi, STM32, NXP
- Commercial Robot: Cruzr, Alhpa Ebot, Yanshee

LEADERSHIP EXPERIENCE

- Initiated **Daffodil Robotics Lab** in 2019 at Daffodil International University and played the role of Lab In-charge
- Initiated **Bangladesh Robotics Foundation** in 2017 and played a role as Chairman.
- Initiated **Daffodil International University Robotics Club** and played the role of President from 15th January 2015 to 1st January 2016. Now playing the role of club convener.

EXPERIENCE AS KEYNOTE SPEAKER AND TRAINER

- Seminar on “Mobile Robot Navigation” at the *North-South University* [2024]
- Semian on “ROS: Robot Operating System” at the Green University of Bangladesh [2024]
- “Keynote speech in Innovation Competition 2024” at *International University of Business Agriculture and Technology (IUBAT)* [2024]
- “Opportunity and challenges in Robotics” at *Global Robotics Cluster by*

Resume of Hafizul Imran

Mechatronics and Robotics Society of the Philippines [2023]

- Seminar on “4th Industrial Revolution” at *Rajshahi University of Engineering & Technology (RUET)* [2022]
- Seminar on “Artificial Intelligence & Machine Learning” at the *International University of Business Agriculture and Technology (IUBAT)* [2018]
- Seminar on “Artificial Intelligence & Machine Learning” at *Chittagong University of Engineering Technology (CUET)* [2018]
- Seminar on Machine Learning in Robotics” at the *East-West University (WEU)* [2018]
- Seminar on “Introduction to Robotics” at *American International University Bangladesh (AIUB)* [2018]
- Seminar on “Introduction to Robotics” at *Jahangirnagar University* [2018]
- Seminar “Robotics & Artificial Intelligence” at the *Ahsanullah University of Science and Technology* [2017].
- Workshop on “Arduino & Basic Robotics” at the *Independent University of Bangladesh (IUB)* [2017]
- Seminar on “Robotics & Artificial Intelligence” at *Jagannath University* [2017]
- Seminar on “Humanoid Robot” at the *University of Dhaka* [2017]
- Workshop on “Robotics & Embedded Systems” at the *University of Liberal Arts Bangladesh (ULAB)* [2016]
- Seminar on “Internet of Things (IoT)” at *Daffodil International University* [2015]

EDUCATIONAL BACKGROUND

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|---------------------|---|
| 2022-Present | PhD Research Fellow (Research Topic: Mobile Robot Navigation)
Universiti Sains Malaysia, Penang, Malaysia.

Degree Award: Expected in December 2025 |
| 2017-2018 | Masters in Computer Science
Jahangirnagar University, Savar, Dhaka, Bangladesh
CGPA 3.15 out of 4.00 |
| 2011-2015 | Bachelor of Science in Electrical and Electronic Engineering
Daffodil International University, Dhaka, Bangladesh
CGPA 3.56 out of 4.00 |

RESEARCH

PUBLICATIONS

Journals:

1. **Imran, Md Hafizul**, Rifat Bin Mahi, Rony Saha, Md Hasan Islam, and Imran Mahmud. "NISHASH: A reasonable cost-effective mechanical ventilator for COVID-affected patients in Bangladesh." *Heliyon* 8, no. 5 (2022). DOI:<https://doi.org/10.1016/j.heliyon.2022.e09400> (ISI, Scopus Q1)
2. Mahi, Md Julkar Nayeem, Sudipto Chaki, Esraq Humayun, **Hafizul Imran**, Alistair Barros, and Md Whaiduzzaman. "A Review on VANET Security: Future Challenges and Open Issues." *Indonesian Journal of Electrical Engineering and Informatics (IJEI)* 11, no. 1 (2023): 180-193. Indonesian Journal of Electrical Engineering and Informatics (IJEI), 11(1), pp.180-193, Indonesian Journal of Electrical Engineering and Informatics (IJEI), Vol:11, No-01 DOI: 10.52549/ijeie.v11i1.4295 **Scopus, Q3**
3. Islam, T., **Md. Hafizul Imran**, Md. Ramim Hossain, Md. Tamjeed Monshi, Himanish Debnath Himu, Md. Ashikur Rahman, & Gourab Saha Surjo. (2022). Deep Learning Approaches to Predict Future Frames in Videos. *International Journal of Recent Contributions from Engineering, Science & IT (iJES)*, 10(03), pp. 63–79. <https://doi.org/10.3991/ijes.v10i03.33893>
4. **Md. Hafizul Imran**, Rony Shaha, Rifat Bin Mahi, Md Rokon Ujjaman, Vertical Axis Wind Turbine: A Novel Approach to Development and Modeling, *International Journal of Computer Applications, Foundation of Computer Science (FCS)*, NY, USA (IJCA July 2021) DOI: 10.5120/ijca2021921405

Conference:

1. **Hafizul Imran**, M., Ziaul Haque Zim, M., Ahmmed, M. (2021). PIRATE: Design and Implementation of Pipe Inspection Robot. In: Uddin, M.S., Bansal, J.C. (eds) *Proceedings of International Joint Conference on Advances in Computational Intelligence. Algorithms for Intelligent Systems*. Springer, Singapore. https://doi.org/10.1007/978-981-16-0586-4_7
2. Asha, Mst Lima Akter, Muntasir Ahmed Rafi, Md Sazzadur Ahamed, and **Md Hafizul Imran**. "Suggesting Playlist and Playing Preferred Music Based on Emotion from Facial Expression." In 2024 3rd International Conference for Innovation in Technology (INOCON), pp. 1-5. IEEE, 2024.

LANGUAGE PROFICIENCY

- Bengali - Excellent
- English - Excellent

REFERENCES

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DECLARATION

According to my knowledge, the above information provided by me is true.

Md. Hafizul Imran
(Date: August 01, 2024)