Taki Uddin

takiuddin93
takiuddin93@gmail.com
takiuddin93
+880 174 96 07995

about

I am an android developer and a tech enthusiast who's always eager to learn new things. I am also a part of a start up in Dhaka (input chobir baksho). I am constantly looking for opportunities to further push myself to excel in my career and skill sets. I want to enhance and use my skill sets in ways I can make a difference to my society and community.

education

2018.
IDP Bangladesh
IELTS - **Score 7.00**

2012 - 2018.
North South University
BSc in Electronics and Telecommunication Engineering - **CGPA 2.22**

2010 - 2011.
Bangladesh International School, English Section, Riyadh, K.S.A
A-Levels - **GPA 4.33**

2009.
Bangladesh International School, English Section, Riyadh, K.S.A
O-Levels - **GPA 5.00**

work experience

Chobir Baksho
September 2017 - Present.
-Project Manager
Overlooking the entire platform, from building it from scratch, test, to deploying it live. Managing cost estimation, technology uses and quality assurance.

Asiatic Marketing Communications Limited
September 2017 - Present.
-Junior Android Developer
Mobile app development, working alongside with clients to develop a seamless UI with smooth UX on at least 90.1% of android devices.

Grameenphone
May 2017 - August 2017.
-Intern
Software quality assurance for the Skitto app. Reporting app issues and bugs over to the developers via JIRA platform.

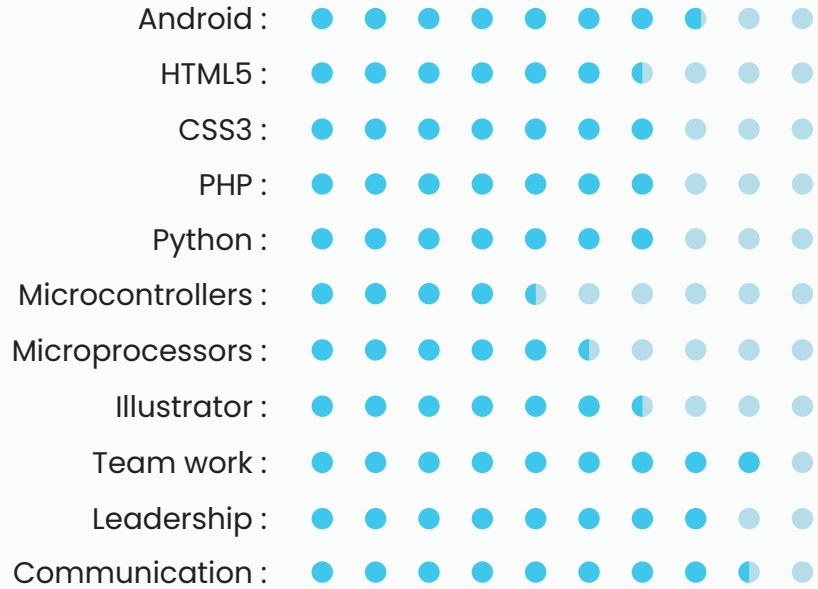
Team NSU Spark
March 2016 - Present.
-Software & Design
Team NSU Spark is a team of students and fresh graduates of North South University Dhaka, Bangladesh.

IEEE North South University Student Branch (INSB)
September 2015.
-Instructor
Workshop sessions on Arduino, basic Bluetooth controlled servos and car.

North South University Communications Club
August 2015 - December
-Founding Treasurer
Account for money spent on events organized by the club, both national and international level.

Imprint Dhaka Limited
May 2015 - October 2015.
-Management Trainee
Talk to customers online and respond to their queries and assist them from ordering a product to receiving them.

skills



reference

Dr. Mohammad Monirujjaman Khan
Assistant Professor, Department of Electrical and Computer Engineering North South University
phone:
+88 02 55668200 Ext - 1533
email:
monirujjaman.khan@northsouth.edu

Md Tanzib Hossain
Senior Web Developer-Asiatic Marketing Communications Limited (AMCL)
phone:
+88 01717887317
email:
tanzib.hossain@asiaticjwt.com

Baized Shuvo
Founder, Robotech Shop
phone:
+88 01737295547
email:
shuvo@robotechshop.com

research

My research interest lies in robotics focusing mainly on swarm robotics. During my undegrad study, I worked on internet of things, embedded systems(motors and actuation) and control. Below are my research and publications works; I've done and have been involved so far.

Paper Publication
2017

8th ICCCNT Conference in IIT Delhi, India

-Design, Control & Performance Analysis of Forecast Junction.

Summary

- The system creates a distributed sensor nodes using low cost wireless sensors. As a result the system were all connected for smart sensing. Swarm robots is used to communicate with each other and do the mapping of an area, sub bots send signal to mother bot and after completing the task they return to mother bot. To protect against natural disaster like floods before it hit's an area. The end result shows the feasibility, reliability, galactic impact of the system.

Paper Publication
2016

IEEE IEMCON 2016 Conference in Vancouver,

-Design, Control & Performance Analysis of Muktibot

Summary

-Muktibot is build and functioned in replace of human to save their life in bomb disposal mission. The performance analysis and efficiency of the entire system is established through practical studies. The end result denotes the sustainability, affordability and reliability of the Muktibot in practical operation.

Research Assistant
2015-2016

Urban Search and Rescue Using Marsupial Robots

I have contributed as a software developer as well as an embedded system developer on all the papers. Working primarily on automation and design of the robots. Under the guidance of **Dr. Lamia Iftekhar** and **Dr. Nova Ahmed**

projects

Over the period of 6 years in my undergraduate life, I have taken upon many projects. Few of them were for competitions and few were just done to nurture my hobbies as a DIY enthusiast. Below are the list of the best few

• **An android & joystick controlled user-friendly wheelchair**: This paper introduces a wheelchair that is based on user-friendly smart technology. The wheelchair is controlled via smartphone android app. Joystick option is also available in case of user demand. Performance analysis is shown to evaluate how the wheelchair is unique. The efficiency of the entire system is established through practical studies. The end result denotes the practicality, affordability and reliability of the smart wheelchair. This paper also enables the immense possible research scope for handicapped people.

• **Gesture Controlled Cursor**: A mouse controller is developed using two green trackers which are worn on the fingers of the user. The green color is filtered using appropriate BGR values. Then by using morphological transformation noise is removed. Lastly, these colour values are tracked and mapped accordingly to the mouse pointer using the pynput and tkinter libraries with also implementation of basic mathematics. This also gives access to click and drag gesture(geometry concepts) like in the mouse. The project was made using the open computer vision library, opencv, in python which is shown implemented.

• **Urban Search and Rescue Using Marsupial Robots**: A common distinction of marsupial mammals like a kangaroo is that the mother carries around the child in a pouch. Inspired by this concept from nature is the idea of marsupial robots. In this paper a larger multi-terrain ”mother robot” and smaller versatile ”baby robots” are designed. The mother robot would carry in its interior the baby robots through a treacherous and rugged terrain to a central rescue location, providing rapid, efficient and a sheltered transportation. The baby robots can then come out and start urban search and rescue by locating and helping people from a collapsed or damaged structure, where it is risky for humans or rescue dogs to go. Once the job of delivering the baby robots is complete, the mother robot acts as a ”base station”. It also has the task of transporting the baby robots back to safety once the mission is complete. In this demo we have designed the mother and baby robots which are suitable for urban search and rescue mission.

• **Mars Exploration Rover(Phobos)**: A rover was designed mimicking the famous Mars rover Curiosity. The rover was designed to navigate in hard terrains and was meant to be teleoperated by a user from a distance. The rover was fitted with a 4 axis robotic arm, capable of doing a variety of tasks. The rover had an IP camera that streams live video to the user end.

• **DC Powered Three-Wheeled Electric Scooter**: Battery powered electric scooters are of great convenience for use off roads. Generally they do not have engines and hence maintenance requires only cleaning and recharging for the most part. DC motors drive these scooters and one way to control the speed is through Pulse Width Modulation (PWM). This project shows the design and implementation of a three-wheeled scooter with a novel mechanical structure, which is powered by a rechargeable DC source and runs via logic provided by a microcontroller. It is a low cost design that entirely uses parts available in Bangladesh local market. The simple and intuitive design can be easily disassembled and rebuilt. This design can be followed to build similar transport mechanism in other places or countries.

• **Wall Following Robot using PID Controller**: A wall following robot was designed with the famous control algorithm known as PID was implemented. To detect the walls and any obstacles in front, ultrasonic sensors were used. The track consisted of obstacles and turns. The robot traversed through the track in the shortest time, 13 seconds, amongst other robots that were a part of the competition. Later, it was awarded the 1st prize in the robot race segment in competition organised by TechFest, Dhaka, Bangladesh.

• **Remote Monitoring of Sensor Data using RF Technology** : A number of sensors were taken together and a system was developed were the readings were sent to a receiving node which was connected to a microcontroller and an LCD display. The received data was then shown in the display. RF433 transreceivers were used to transmit and receive the data – both of which was interfaced with the Arduino microcontroller.

• **Combat Robot**: A roller robot was developed which was controlled using Bluetooth technology and a PS3 controller. The robot had a slope as its primary weapon, meant to topple over its opponent. It was powered using a battery and weighed almost 5 kilograms.

• **Maze Solving Line Follower Robot**: A maze solving robot was made using a robot chassis with appropriate motors and sensor arrangement as specified in the competition rules. An eight-array IR sensor was used to detect the lines in the maze. The algorithm used here was the left hand rule to solve the maze.

• **4 Wheeler Robot Control using Mobile Application**: the goal of this project was to make a system which can work remotely. Hence, a bluetooth app was developed using MIT App Inventor which can send data to a bluetooth module HC05 which is connected to an Arduino microcontroller. This system was demonstrated by controlling a robot chassis remotely. By sending appropriate data, the robot moved forward, backward, left, right and stop. This was programmed into the Arduino microcontroller.

• **Anti-Theft Alarm System for Small Office Spaces**: The project's main motive was to detect the entry of any personnel at abnormal times. The device consisted of an ultrasonic sensor and a motion sensor which worked together to identify if there was any abnormal entry. If there was, an alarm would be triggered and people would be notified. The device was set up at the corner of the room since the motion sensor ranges in a spherical shape which makes it cover almost the whole room.It was programmed using the Arduino micrcontroller.

acheivments

2017	1st Runners Up, Hackathon for Environmental Migrants Wageningen University, Netherlands
2017	Champions Embedded Systems Techkriti'17 IIT, Kanpur, India
2017	1st Runners Up in TIC Techkriti'17 IIT, Kanpur, India
2016	Champions Techfest IoT, Bombay, India
2015	Champions Techfest wall follower, Dhaka Bagladesh.