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Objectives

I strongly intend to deliver my skills and innovative ideas as a software engineer. I want to work in a professional environment to cope up with the competitive world and contribute to the society.

Education

North East University Bangladesh (NEUB), Sylhet
B. Sc. (Engg.) in Computer Science & Engineering, (2018 - 2022)
[Expected Graduation: 20th December, 2022]

Dhaka Imperial College
Higher Secondary Certificate (HSC), 2018

Dampara K.M.U High School
Secondary School Certificate (SSC), 2016

SKILLS

Programming Languages: C, C++, Java, Python, Arduino, PHP, JavaScript.

Technologies: HTML5, CSS, SASS, MySQL, Python Machine Learing & AI.

Framework & Library: Sklearn, Arduino, Bootstrap, GitHub Actions, PHPMailer.

Tools & Software: Unity Engine, Android Studio, Eclipse, Netbeans, Codeblocks, Adobe Illustrator, Photoshop, Blender, Filmora, Microsoft Office, Jupyter Notebook, VSCode, Google Colab, Arduino IDE.

Language Proficiency: Very Good reading, writing, speaking & listening skills in Bengali and English.

Achievements

103rd Position [Team: NEUB_TeamXero]
ICPC Dhaka Regional 2021 - Onsite Contest (2nd Round, Regional Final)

1677th World Position (13th in BD) [Username: arnabxero]
Google Code Jam 2021 Qualification Round

90th Position [Team: NEUB_DivisionByZero]
ICPC Dhaka Regional 2020 – Onsite Contest (2nd Round, Regional Final)

2nd Runner Up [Team: Gladiators]
SJ Innovation Full Stack Web Development Hackathon 2021

661th Position [Team: NEUB_Silent]
ICPC Dhaka Regional 2019 – Online Preliminary

Champion
NEUB Eid Mubarak Code Challenge - 2020

1st Runner Up
Robotics Contest
NEUB ICT FEST – 2019

2nd Runner Up
Project Showcasing
NEUB ICT FEST – 2019

1st Runner Up
NEUB October Code Challenge

Researches

Poroelastic Mechanosensing Soft Robot
PhD Research [Ongoing]
Dept. of Chemical Engineering
Auburn University
This is a soft robot project I have been working on for last few months as a programmer. The goal of this research is to developing an ionic sensor for robots that can sense touch, pressure and interactions as like human. This research will make a robot capable of sensing it's environment similar to a human being.

2D Hand Drawn Incomplete Shape Completion
Thesis Research [Ongoing]
Dept. of CSE
North East University Bangladesh
This is a Machine Learning research that I have been doing for last 6 months for my Thesis. The goal of the research is to recognize various shapes drawn by human hand and are not fully complete. After recognition of the shape

class, the second step is to complete the shape. This research can be useful for self-driving car's road sign detection while driving in full speed as it will be able to recognize the road signs from partial data. Also this research can be used to teach children to learn drawing various shapes and alphabets.

Projects

ReachMe - A Social Media Platform

This a social media platform website with admin panel. I developed this entire project from scratch. I used PHP for most of the backend operation management, as well as HTML, CSS for frontend and JavaScript, jQuery for some backend functionalities and optimization. I used MySQL for data storage and MySQL Event for timed MySQL Command Execution. I also used PHPMailer for verification code and notification emailing service. Fontawesome 5 is used for icons and Bootstrap 5 is used for mobile view optimization.

FOODIE - A Social Media for Foodies

This is a food review and recommendation platform built with php, html, css, js and MySql.

NEUB Workshop Site

I developed my university's workshop site using PHP. The site features a secured student registration and login system as well as workshop registration, attendance, scheduling, noticeboard and programming contests.

NEUB CodeLand Forum Site

I made a web forum website for my university. I used html, css, javascript, jQuery, MySQL, PHP etc. to complete this one. That was my first ever dynamic website project.

Face Recognition Using My Own Dataset - Machine Learning

This is one of my biggest AI project. I used machine learning, more specifically CNN to recognize 11 Bengali movie stars. The network was trained using my self-made dataset consisting of more than 4000 images.

Robotic Arm with Manual & Auto Control

I made a robotic arm controllable semi automatically or full manually by the control panel. I was initially planned to use glove control but lack of fund and materials/components forced me to implement the arm with the control panel instead of using a hand glove control.

Smart LFR

This is a normal line follower robot with a different feature. Sometimes line follower robots loses track because of high speed and environmental or hardware issues. But the LFR I made, has a capability to remember the last seen path before getting lost. After getting lost, a path finder algorithm runs

and it uses the last seen experience data to determine that in which direction it will try to find the path. The process of path finding here, may seem complex. But I was able to achieve that complex system with a surprisingly simple code.

WIFI Controlled Car with ESP8266 and Arduino

This is the startup/warm up part of my one of the biggest project named "XeroBot". The main concept is to make a robot that can go to humanly unreachable places and can interact with the environment like a real human being.

Smart and Automated Water Pump Controller and Water Level Indicator

The Goal of this project was to control the water pump we use in houses and factories to fill the water tanks. It has 3 modes, manual, semi auto and full auto. Manual mode gives the user to control everything. In semi auto mode, user can start the pump manually anytime he wants, and the system will turn the pump off when the tank is full automatically. In full auto mode, user has no control, the pump is started by the system whenever the tank gets empty and stops the pump when the tank gets filled.

A Very Simple Retro Style Game

This is a simple old school retro type game I made for one of my university courses in Java.

A Demo Operating System

This is a demo operating system software made with Java and Java Swing framework. This software contains few very basic features of a typical operating system. The features available are: File Browsing, File Searching, Power menu with Restart and Shutdown option.

A Simple Calculator with Java GUI

This is just a simple calculator I made for one of my university courses project. It has two unusual buttons, one redirects to my university website and another redirects to my personal Facebook profile.

Demo Bank Management Application

This is a demo bank management application I made for one of my university courses.

Other Achievements

Srijansheel Medha Anweshan: 1st Position in District level.

Debating: 1st Position in Sub-District level.

References

Engr. Tofayel Ahmed Ovee
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