TANUMON ROY

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Education

National Institute of Technology, Warangal - B. Tech - 7.49 CGPA

Burdwan Municipal High School, Barddhaman, W.B. - Class XII - 88.2%

JULY 2017 - Present

Electronics and Communication Engineering (ongoing 6th Semester)

JUNE 2015 - MAY 2017

WBCHSE Board (Science)

St. Xavier's School, Barddhaman, W.B. - Class X - 93.6%

APR 2007 - MAY 2015

ICSE Board

Subjects

Electives

Object-oriented programming, Data Structures, Practical Machine Learning with Tensorflow (NPTEL), Internet of Things

Technical Proficiency

Python, C/C++, Java, Object-Oriented Programming (OOP), Data Structures, Algorithms, Machine Learning, Deep Learning, HTML + CSS, Bootstrap, SQL, PHP, DBMS, PhpMyAdmin, Git, Github, IFTTT, AWS, Arduino UNO, ESP8266, Octave, R-Programming, VHDL, PSpice, MATLAB, AutoCAD, MIT AppInventor, Adobe Photoshop, Adobe Illustrator, FL Studio

Projects

Tic-Tac-Toe Game design

JUNE 2020

Tic-Tac-Toe game designed in Python 3.x using Backtracking (Minimax algorithm) as the logic and Tkinter for the GUI.

Phishing URL Detection with Machine Learning

MAY 2020 - JUNE 2020

Collected various URL data, extracted the features, built a Neural Network model using tf.keras and trained that model to identify potential phishing URLs. Test accuracy was about 80%.

Huffman encoding in Python

MAY 2020

Wrote Python code for applying Huffman encoding to a text file and compressing it to form the .bin file, then decompressing it to retrieve the original text file. Data Structures used were hashmaps, trees and min-heap.

Dynamic Web Page design

APR 2020 - MAY 2020

Designing a fully functional marketing webpage using HTML, CSS, Bootstrap in the front-end, and MySQLi, PHP in the back.

Resolving Overfitting problem in a ML model

FEB 202

Resolved Overfitting problem in a ML model over FMNIST dataset by introducing a dropout layer with rate 0.2 after the hidden layer and then increasing the number of training epochs. Accuracy of the model increased from 87% to almost 88.7%.

Gesture-controlled Robot

JAN 2020

Successfully made a robot car which followed the direction in which the user tilted the smartphone.

LED Chaser Circuit OCT

Designed a LED chaser circuit with its own power supply unit to convert AC input to suitable DC. Major components used were 555 timer IC and CD4017 decade counter IC.

RFID-enabled Remote Door Lock System

OCT 2019 - NOV 2019

Implemented Internet of Things while designing a door lock, as a part of Home Security System. Components used include ESP8266 WiFi module, RFID RC522 reader, AWS IoT core, Amazon SNS, Blynk App and solenoid lock.

Handwritten Digit Recognizer

SEP 2019 - OCT 2019

Built a machine learning model over the MNIST dataset which is a Neural Network trained by Stochastic Gradient Descent with the help of libraries like Lesagne, Theano and Numpy.

Voice controlled Home Automation

SEP 2019

Controlled various electrical appliances using Voice via Google Assistant, tied up with IFTTT and Adafruit IO. Here, the ESP8266 WiFi module was used and the embedded code for this was written in Arduino IDE.

Designing FIFO operation over FPGA using Verilog HDL

MAR 2019 - MAY 2019

Designed basic FIFO operation over a Field Programmable Gate Array (FPGA) in Verilog HDL using Vivado 2018.3 software by Xilinx. The FPGA used was of the Spartan 6 model.

Basic mini projects on Arduino UNO

DEC 2017

Online Certifications & Trainings

Machine Learning Career Track - Coding Ninjas

https://ninjasfiles.s3.amazonaws.com/certificate93748147d95556334475973f9abf75e2b056a8.pdf

https://ninjasfiles.s3.amazonaws.com/certificate9374806becf11945c8a9c1e38af36ed6a907df.pdf

Online Certified course on Python, Data Structures-Algorithms in Python and Machine Learning, offered by Coding Ninjas.

Web Development - Internshala

https://trainings.internshala.com/verify_certificate

Online Certified course on Web-Development using HTML, CSS, Bootstrap, SQL and PHP, offered by Internshala. (Cert. No.: 09438935-A356-D6E1-6C45-18813372602E)

Practical Machine Learning using Tensorflow 2.x - NPTEL

https://nptel.ac.in/noc/Ecertificate/?q=NPTEL20CS44S1PC582591

Online Certified course on Machine Learning and Deep Learning using Tensorflow 2.x, authorized by IIT Madras and Google, offered on NPTEL.

Machine Learning with Python - Kaggle

https://www.kaggle.com/learn/certification/tanumonroy/python

https://www.kaggle.com/learn/certification/tanumonroy/intro-to-machine-learning

Online micro-course on Python and Machine Learning, offered by Kaggle.

Python 101 for Data Science - CognitiveClass.ai

https://courses.cognitiveclass.ai/certificates/9975f9253add43428c32f3e1423204a4

Online certified course on the introduction of python and its basic use towards Data Science.

Machine Learning - Coursera

https://www.coursera.org/account/accomplishments/verify/SPUBG76243CD

Online non-credit course, taught by Andrew Ng, authorized by Stanford University and offered through Coursera.

Positions of Responsibility

Event Organiser at Youth Fest 2020

JAN 2020

ROBOTICS CLUB, NIT Warangal

Organized an exhibit showcasing working prototypes of different kinds of robots for local school children; Organised a quiz event on robotics for almost 60 participants.

Executive Member

SEP 2019 - Present

ROBOTICS CLUB, NIT Warangal

Selected as the Executive Member of ROBOTICS CLUB, NIT Warangal for the Academic Year 2019-20.

Member of Organizing Committee

JAN 2019 - Present

Bengali Group NITW

Member of the Organising committee for Saraswati Puja (cultural festival) at college.

Extra-Curricular Activities

Guitar

Professionally trained and Distinction certificate for Part-1 (2005-2006), Part-2 (2006-2007) and 1st Year (2007-2008) issued by Pracheen Kalakendra (Chandigarh).

Vocals (Singing)

Professionally trained from 2008 to 2013. Achieved Distinction certificate for Rabindra Sangeet (vocal) in 1st Year (2007-2008) issued by Pracheen Kalakendra (Chandigarh).

Painting

Professionally trained from 2004 and achieved 1st Division certificate in Part-2 (2004-2005) and 1st Year (2007-2008) issued by Pracheen Kalakendra (Chandigarh).

Music Production

Produced electronic music using softwares like FL Studio and Audacity, and released on platforms like Spotify, YT Music etc.

Swimming

Professionally trained from MAR 2009 to OCT 2010. Achieved Certificate of Participation in city-level competition organized by Children's Cultural Centre, Alamgani, Burdwan.

Awards & Recognitions

Sport's Day by St. Xavier's School, Burdwan

DEC 2014

Achieved 3rd position in Shot-put during Sport's Day in St. Xavier's School, Burdwan.

National Science Olympiad by Science Olympiad Foundation (SOF)

MAR 2012

First Position in School level NSO conducted by SOF in 2009 and 2012. Participation Certificate from 2007 to 2012.

Painting Competition by Govt. of West Bengal

JUN 2008

Achieved merit certificate in painting competition organized during Forest Week (2006 and 2008) by Government of W.B.

Profiles

LinkedIn: https://www.linkedin.com/in/tanumon-roy-6b2109193

Github: https://github.com/t-ROY-coder

Languages

English, Bengali, Hindi (Read/Speak/Write)