TANUMON ROY

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Education

National Institute of Technology, Warangal – *B. Tech* – **7.52 CGPA** (upto 6th Semester)	JULY 2017 - Present
Electronics and Communication Engineering	
Burdwan Municipal High School, Barddhaman, W.B. – *Class XII* – **88.2%**	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, JavaScript, Object-Oriented Programming (OOP), Data Structures, Algorithms, Machine Learning, Deep Learning, HTML + CSS, Bootstrap, SQL, MongoDB, PHP, DBMS, PhpMyAdmin, Angular, Node.Js, Express, Git, Github, IFTTT, AWS, Arduino UNO, ESP8266, Octave, R-Programming, VHDL, PSpice, MATLAB, AutoCAD, MIT AppInventor, Adobe Photoshop, Adobe Illustrator, FL Studio

Work Experience

Internship

Full-Stack Developer, Opennets	JULY 2020 - AUG 2020

Full-Stack developer intern at Opennets (Computer Networking company based in India and USA)

PROJECT

Designed and created an interface to achieve the following:

- Create custom topologies
- Configure the topologies through topology and runtime JSON files
- Send the topology configurations to Mininet (network emulator) for virtualisation
- Test for the correct program configurations and successful packet transfers

Projects

Chat-App	JULY 2020

A simple and elegant chat room web-application written primarily using Node.js and Socket.io on the server-side. Hosted the project via Heroku web-hosting platform on the URL: https://roy-natter.herokuapp.com

Resume Website	JULY 2020

Designed a personal resume website using HTML, CSS and JS. Hosted the project via Github-pages web-hosting platform on the URL: https://t-roy-coder.github.io

Weather-App	JULY 2020

Designed a weather forecasting web-app providing the current weather details of any place. Used HTML+CSS in the client-side and Node.js in the server side. Weather and location data used from mapbox.com and weatherstack.com. Hosted the project via Heroku web-hosting platform on the URL: https://troy-weather-app.herokuapp.com

Custom Decision-Tree classifier design	JUNE 2020

Designed a custom Decision Tree from scratch on the Iris dataset using Information Gain (Entropy) and Gain Ratio as the metrics used to determine the features and boundary conditions to split the data.

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 2020
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 2019
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

Full-Stack Development – Udemy
Online Certified courses on development using JavaScript, TypeScript, MongoDB, Express, Angular and Node.Js offered by Udemy.

Machine Learning Engineer 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, Alamganj, 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.

Links

LinkedIn: https://www.linkedin.com/in/tanumon-roy-6b2109193
Github: https://github.com/t-ROY-coder

Languages

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