Nikunj Saini

Student

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GitHub

EDUCATION

UNIVERSITY OF DELHI   November 2020 - July 2024
Bachelors Information Technology and Mathematical Innovation   New Delhi, India
CGPA: 8.83

GYAN BHARATI SCHOOL   2019 - 2020
Higher Secondary Certificate Science Stream   New Delhi, Delhi
Percentage: 94%

EXPERIENCE

RESEARCH WORK | Research Intern   University of Delhi, India | May 2021 – Jan 2022

The motive of this research was to study the effect of Carbon Quantum Dots on the double slope solar still and to enhance the efficiency of the still by mixing CQD's in water. The system was also connected to an active Evacuated Tubular Collector .The following tasks were done by me-

- Derivation of the water mass equations and energy balance equations for the system.
- Study the effect of CQD on thermo-physical properties of water.
- Code the equations to find the temperature of water in the form of a linear ordinary differential equation

UDEMY COURSE | Ethical Hacker   Delhi, India | May 2022 – June 2022

The course helped me develop the following skills-

- Network Hacking - Pre connection attacks, Gaining access to WEP/WPA/WPA2 networks, Post connection attacks, Man In the Middle attacks.
- Computer Hacking - Server side attacks, Client side attacks, Social Engineering, Creating Backdoors.
- Website Hacking - Gathering Information, File upload and Code Execution Vulnerabilities, SQL injection Vulnerabilities, Cross site Scripting vulnerabilities and Discovering Vulnerabilities.

DIGIPLUS | Subject Matter Expert(Mathematics)   Delhi, India | June 2022 – August 2022

During this internship, my ask was to provide clear written solutions to questions that were asked on the online platforms.

I was also assigned the task of quality inspection of answers online and mandatory changes as and when required.

This internship helped me to get used to LaTeX.

SKILLS

Programming Languages	C, C++, Python, Java, JavaScript, PHP, HTML, CSS, Typescript
Libraries/Frameworks	AngularJS, Python Flask
Tools / Platforms	Git/Github, VScode, LaTeX
Databases	Python SQlite

PROJECTS / OPEN-SOURCE

WEB AUDIO RECORDER | Link   JavaScript, HTML, CSS, Python Flask, SQLite

With this project, my aim was to record the audio for online meetings which can be downloaded in .wav format. The site also has a section where you can store the data about your upcoming meetings as well.

IMAGE COMPRESSION | Link   MATLAB

With this project my aim was to develop a program in MALTAB, that takes a picture from the computer, compresses it to a specific size and then finally download it.

NEW FRACTAL CONCEPT | Link   Wolfram Mathematica

This project was a part of my semester long project. In this we had to design a new fractal. The design is similar to a ninja star when we increase the number of iterations, so the name I gave was Ninja Fractal

CYBER SECURITY | Link   KALI Linux

In this project, I have explored numerous ways in which the data can be stolen from your devices and the hacker may get access to your devices.

I had also tried to implement methods through which a successful backdoor can be generated for data theft. In the end, I explored the counter measures for such attacks so that our device stays secure from such attacks.

GENERATIVE MACHINE LEARNING MODELS | Link   Python, LaTex

In this paper, different versions of Generative Adversarial Networks are implemented on the Electroencephalogram (EEG) data to generate similar outputs.

We have compared three GAN frameworks namely Wasserstein GAN (WGAN), WGAN with Gradient Penalty (WGAN-GP), which is the enhanced version of WGAN and the third framework that we had used is Deep Convolutional GAN (DCGAN), which was not implemented on the data set of EEGs earlier.

NATURAL LANGUAGE PROCESSING | Link   Python

In this project, I used a dataset of 20000 pre-classified tweets and trained models on it.

Then I extracted tweets from Twitter using Snscrape based on the queries "female athletes,", "female sports," and "woman sports."

These are the tweets on which the models check for misogynistic features and classify the tweet as misogynist or non-misogynist.

CERTIFICATIONS

- Basic Ethical Hacking and Penetration Testing Course from Udemy - Udemy
- Python for Data Science and Machine Learning Bootcamp - Udemy
- Deep Learning: Convolutional Neural Networks in Python - Udemy
- Deep Learning: Recurrent Neural Networks in Python - Udemy