

Vishal Singhanian

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EDUCATION

MANIPAL UNIVERSITY JAIPUR

Faculty of Engineering

BTECH IN COMPUTER AND

COMMUNICATION ENGINEERING

MINOR IN DATA SCIENCE

Aug 2024 | Jaipur, Rajasthan

Cum. GPA: 8.91 / 10.0 (till 5th Sem)

LINKS

Github/SinghanianV

LinkedIn/singhanian-v

Kaggle/bigvish

CodeChef/big_v

Codeforces/BigV_

Leetcode/bigV_

COURSEWORK

UNDERGRADUATE

Design and Analysis of Algorithms

Data Structures and Algorithms

Object Oriented Programming

Operating Systems

Database Systems

Computer Networks

Wireless Communications*

Computer Architecture

Machine Learning*

Automata Theory & Compiler Design*

Probability & Statistics

Discrete Mathematics

[*to be completed by May 2023]

OPENCOURSEWARE

(Google Drive link to Certifications)

SKILLS

PROGRAMMING

Comfortable:

C • C++ • Python • Java

MySQL

Familiar:

MATLAB • Shell • Git

HTML, CSS • JavaScript

INTERESTS

Algorithms • Math • Economics

Competitive Programming

PROJECTS

STOCK EXCHANGE | API, WEBAPP, DATABASE

Flask | SQLite | Python | HTML, CSS | JavaScript

- A WebApp that allows logged-in users to "buy" and "sell" stocks (with pretend money) as well as look up real stock quotes fetched from **IEX API**. Users can also view their stock portfolio transaction history.
- The **Database** stores a **hash of the user's password** corresponding to their username.
- Require that a user input a **stock's symbol** whose quote is displayed by **querying IEX** for stocks' prices.
- All the **transactions** are subsequently updated in the **database** and in their book.

WORDLE | CLI APP, INFORMATION THEORY, ALGORITHM

Python

- An implementation of the famous game **Wordle** (originally developed by Josh Wardle) in Python than can be played via the terminal.
- Player should guess the word in at-most six guesses. Each guess must be a valid five-letter word. The color of the tiles will change to show how close your guess was to the word.
- Using dataset of 6000 five-letter words, implemented an **Algorithm** that solves any wordle game in at-most four guesses, from **3b1b's entropy idea**.

HOUSE PRICE PREDICTION | DATA SCIENCE, MACHINE LEARNING

NumPy | Pandas | Python

- With seventy-nine explanatory variables describing (almost) every aspect of residential homes in Ames, Iowa, used **NumPy** and **Pandas** to extract useful data which affects house prices.
- Applied advanced regression techniques like **Random Forest** and **Gradient Boosting** to predict the prices (ranked under 800 out of 21k competitors on Kaggle).

PASSWORD MANAGER | CRYPTOGRAPHY, SYMMETRIC-KEY ALGO

Fernet | Python

- A CLI Password Manager in Python which uses the **Fernet** module in **Cryptography** (package) to encrypt passwords using **Symmetric-Key** encryption.
- The user can **save** and **retrieve** passwords locally using their **master password**.

ENCRYPTED CHAT | CRYPTOGRAPHY, ASYMMETRIC-KEY ALGO

RSA | Python

- A CLI Chat App which uses **RSA (Rivest Shamir Adleman)** public-private key encryption algorithm to send and receive messages.

ACHIEVEMENTS

2023

3 star (Div. 2)

Highest **rating of 1600** on CodeChef

2023

Global Rank of 293

CodeChef Starters 75

2023

Global Rank of 356

CodeChef Starters 76

2022

Global rank of 946

Codeathon organized by IIT BBS

2022

Qualified Round 1

ACM Semi Code (an Institute level Codeathon)

2021

Open Source

Contribution recognized in **Hacktoberfest**