

# 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.

### 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**.

### WORDLE | CLI APP | ALGORITHM

Python

- An implementation of the famous game **Wordle** (originally developed by Josh Wardle) in Python than can be played via the terminal.
- 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.
- Used **dataset** of 6000 five-letter words.

### 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).

### ENCRYPTED CHAT | CRYPTOGRAPHY, ASYMMETRIC-KEY ALGO

RSA | Python

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

## ACHIEVEMENTS

3 star (Div. 2) with highest **rating of 1600** on CodeChef

**Rank of 946** in a codeathon organized by IIT BBS

**Global Rank of 293** in Codechef Starters 75

**Global Rank of 356** in Codechef Starters 76

**Competitions Contributor** on Kaggle

**Qualified Round 1** of Semi Code (an Institute level Codeathon) by ACM Chapters

Open Source contribution recognized in **Hacktoberfest 2021**