BHAVAY AGGARWAL

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OBJECTIVE

To learn, improve and increase my understanding of our world.

EDUCATION

Bachelors in Science and Technology in Computer Science and Bio Sciences | Indraprastha Institute of Information Technology
2018 – 2022
Coordinator and Founding Member of BioBytes – Computational Biology Club of IIITD

High School | Delhi Public School, RK Puram, New Delhi
2016 – 2018
Class 12 CBSE Boards – 96%
JEE Mains AIR – 17741
JEE Advanced AIR – 5797

PROJECTS

ER Stress Gene Analysis | Cell Biology and Biochemistry
By creating a Machine Learning model, we want to find the extent of contribution of hallmark ER Stress genes in various diseases by trying to predict the disease based solely on the expression of these genes. If ER Stress does not turn out to be the deciding factor of the disease, we try to explain why.

Plants Vs Zombies | Advanced Programming
Using Java, creating a clone of the game Plants Vs Zombies with some additional functionality in-game. JavaFX is used to create a graphical interface for the game.

Cuisine Classification | Summer Project
By trying out various Machine Learning techniques namely Linear SVM, Bayes classifier, Random Forest, Logistic Regression and Perceptron, created a model to predict cuisines solely based on their ingredients. Also, clustered the cuisines based on their similarity, created a phylogenetic tree of the same and co-authored a paper on the same.

Pedestrian Navigator Cap | Introduction to Engineering Design
A Raspberry Pi based Cap with a Heads Up OLED Display to assist pedestrians find their route and ensure their safety from traffic especially in places like Delhi. Open Route service API was used to provide directions. The

Raspberry Pi connects to your mobile device to retrieve Compass and GPS information. The app to communicate with the mobile device was made through MIT App Inventor.

Holographic Gaming Desktop | Introduction to Engineering Design

Using reflection trickery, created a Hologram-like Display out of any device be it a monitor, tablet or even a mobile phone. The monitor used was powered by a Raspberry Pi which ran Retro Pi allowing it to be loaded with games from a plenty of consoles. On top of this, Google Assistant support was also added. Voice to Text API and Google Assistant API were used to achieve this. A futuristic touch to nostalgia.

Sleep Monitor | Introduction to Engineering Design

An Arduino Uno based clock which uses a Motion Sensor to calculate the time user spends in REM sleep. The data is sent to a mobile device connected through Bluetooth which can then be interpreted by a doctor to give accurate medication. The app to communicate with the mobile device was made through MIT App Inventor.

K-Map Solver | Introduction to Programming

A Python based program to automatically solve and provide all possible solutions for a K-Map.

SKILLS

Fluent in

- Python
- Java
- HTML
- Linux

Have worked with

- C++
- CSS
- JavaScript
- C

Tools/Libraries- Scikit-Learn, JavaFX, Matplotlib, Numpy, Pandas, BioPython.

ACTIVITIES

I am very passionate about science. I like to read about scientists and their lives, and obviously their work. Astronomy, Evolution and Physics are some of the things that excite me. To promote Computational Biology in our college, I was an active member in opening the computational biology club BioBytes and now I am its coordinator. At BioBytes, we publish newsletters contains innovations across the computational biology domain and we also have a YouTube series in which we interview prominent scientists, learn more about their lives and get their view on a variety of topics. Apart for this, I am an avid gamer. I enjoy playing Dota 2. It helps me to gain more team skills, mental fortitude and enjoy time with friends.