Kinshuk Phalke

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EDUCATION

Georgia Institute of Technology   Atlanta, GA | Aug 2021-Dec 2024
BACHELORS OF SCIENCE IN COMPUTER SCIENCE
Coursework: Object Oriented Programming, Linear Algebra with Vector Spaces, Integral Calculus

WORK EXPERIENCE

NATIONAL UNIVERSITY OF SINGAPORE | STUDENT RESEARCHER   Singapore | Apr 2019-Dec 2019

- Created a **Machine Learning** app to accurately estimate calories required by a person at a certain time to control food waste.
- Researched and devised relations between **Ghrelin**, the hunger hormone, and calories required by accounting for factors like BMI, Diet Regime and Food Schedule. Used this data and relationship to train the machine learning model.
- Followed **Design Thinking** principles in ideation and in designing the core principles of the idea. Worked intensively on User Experience and on Logo Design by creating prototypes on Adobe XD and photoshop.
- In the Final Competition, presented the app to the judges in Singapore and won the **Best Presentation Award.**

MANIPAL ACADEMY OF HIGHER EDUCATION | SUMMER INTERN   Dubai, UAE | Jul 2019 - Aug 2019

- Used Google's **OpenCV** to create an Object Recognition Model that uses the Computer's Webcam to recognize object placed.
- Worked with **Arduino** and C in creating a **PID Line Following Robot** with the help of Ultrasound and Color Sensors created and interfaced an Arduino robotic car with the Bluetooth Module. Connected the car to a phone via mobile app.
- Learned about **Convolutional Neural Networks** and about Arduino including how **Micro-Controllers** Function.

PROJECTS

TWITAKE ⬈   MongoDB, Express.js, ReactJS, Node.js, Python, NLP, TwitterAPI
A full-stack fake disaster tweet analysis tool that uses TwitterAPI to extract the text from the tweet link and data processing tools like lemmatization, tokenization, N-Grams, Stop Words, removal of punctuation, and a TD-IDF based Logistic Regression NLP model with a 81% accuracy.

MENTAL HEALTH CHAT ⬈   Redis, Docker, MongoDB, Express.JS, ReactJS, Node.JS, Socket.IO
A timed chat for people to share and talk about issues their having in relation with their mental health and help them overcome it. A message in the Redis database is set to expire in about 6 hours in order to encourage people to come out and discourage users calling each other out. Created a Dockerized App with a Redis Instance during development.

CRAVESCALE ⬈   Python, Machine Learning
An app to combat food waste that uses machine learning to make an accurate guess on the calories based on factors like BMI, Diet Regime and Food Schedule. These calories are then converted to the users favourite foods and the quantity so that the user can avoid ordering excess food and wasting.

SPAM FILTER ⬈   Python, NumPY,Scikit-Learn, Pandas, Wordcloud
A spam classification TD-IDF Logistic Regression NLP model with a 95% accuracy to be used in mail and SMS filtering. Visualized and analyzed data using WordCloud and worked on setting optimal parameters.

RESEARCH

IMPACT OF AIRPLANE CONTRAILS & AVIATION POLLUTION ON ENVIRONMENT
A research project to build a device that can monitor the pollution levels in the atmosphere mapping out hot spots and then aiming at decreasing pollution at these sites by attaching a special filter to the airplanes which out decrease the thermal trapping capacity and the increase the efficiency of the fuel to decrease the greenhouse gasses released.

SKILLS

Languages: Python, JavaScript, HTML/CSS, Java, C, C++, C#, Bash
Web & App Development: ReactJS, Express.js, Node.js, Bootstrap, Bulma, Flutter, Ionic Framework, React Native, Socket.IO, Redux
Machine Learning: NumPy, Scikit-learn, Open AI Gym, Matplotlib, Pandas, Keras, NLTK
Technologies: Git, MATLAB, Docker, Postman, LaTeX, SQL, MongoDB, Redis, Kubernetes
Skills: Reinforcement, Supervised and Unsupervised Leearning, Object Oriented Programming, Data Structures & Algorithms
Electronics: Arduino IDE, Raspberry Pi, LEGO Mindstorms