

Kinshuk Phalke

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY
BACHELORS OF SCIENCE IN COMPUTER SCIENCE

Atlanta, GA | Aug 2021-Dec 2024
GPA: 4.0

Coursework: Data Structure and Algorithms, Honors Discrete Math

Clubs: GreyHat (CyberSec Club), dependently-typed (Programming Language Club)

WORK EXPERIENCE

NOTITIA | SOFTWARE ENGINEER

Atlanta, GA | Nov, 2021 -

- Working with Full-Stack and NLP in building a MVP for a startup at Georgia Tech.
- Built a LDA model in Python and worked with tuning UMAP parameters and implemented a clustering algorithm using FAISS. Worked on UI of a WordCloud using React Flow.
- Optimized the front-end, back-end and Flask server, cutting time in front-end by 60% and 40% in MongoDB and back-end.

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.

PROJECTS

PUBLIXMON 

MONGODB, EXPRESS.JS, REACT NATIVE, NODE.JS, FLASK,

Using a deep neural network, OpenCV, React Native, Flask, Node, and Solidity (to create NFT smart contracts), Publixmon creates an engaging social experience for retail shoppers. Users' purchase history is turned into unique, collectibles that can be traded with other users to earn savings and turn local stores into communities. Project Won the First Place at the NCR API Challenge at HackGT 8.

ENHANCE 

PYTHON, TENSORFLOW, KERAS

Created a Res-Net Implementation of the Super Resolution GAN Paper (<https://arxiv.org/pdf/1609.04802.pdf>) for Single Image Super Resolution. I worked with tensorflow in creating a Residual Blocks and Skip Connections and used the VGG-19 Model to calculate the Content Loss of the Model. The model achieved perceptible improvements in image quality on the DIV2K dataset with a downscale factor 4.

HACK-A-LANG 

PYTHON

Worked with a team of 3 for the "hack-a-lang" event, to make the python implementation of the Lox Learning Language, complete with an implementation of dynamic functional environments, type checking, error handling, recursive descent parser and a visitor pattern dependent evaluator. Also, spoke at the event about the evaluator, visitor patterns, environment creation and variable handling. Also, created exercise for the participants to work on to increase their knowledge.

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.

DEUSCL 

RUST, COMMON LISP

A Memory-Efficient, Memory-Safe and Fast REPL that implements Common Lisp and is built using Rust. Implemented a Recursive Descent Parser and a visitor pattern system for the evaluator. Working on implementing a Garbage Collector.

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.

SKILLS

Languages: Python, JavaScript, HTML/CSS, Java, C, C++, C#, Bash, Rust, AWK, Solidity

Web & App Development: ReactJS, Expressjs, Nodejs, Flutter, Ionic Framework, React Native, Socket.IO, Redux, ReactFlow, Web3.js

Machine Learning: NumPy, Scikit-learn, Open AI Gym, Matplotlib, Pandas, Keras, NLTK, Gensim, FAISS, UMAP

Technologies: Git, MATLAB, Docker, Postman, \LaTeX , SQL, MongoDB, Redis, Kubernetes, Blockchain
