

VINEET KALGHATGI

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EDUCATION

University at Buffalo, The State University of New York

Buffalo, NY

Master of Science in Computer Science, GPA : 3.7/4

Aug 2022 - Dec 2023

Coursework: Blockchain, Pattern Recognition, Analysis of Algorithms, Fundamentals of Programming languages, Data Intensive Computing, Data models and query language, Project Management, Information Retrieval

Dr. Ambedkar Institute of Technology

Bengaluru, India

Bachelor of Engineering in Computer Science and Engineering, GPA : 8.84/10

Aug 2017 - Jul 2021

SKILLS

Languages: Python, Javascript, Java, Typescript, Bash

Web Technologies: React.js, Angular, Node.js, Next.js, Django, Flask, Flutter, Express.js

Database: SQL, MongoDB

Technologies/OS: Docker, Git, Linux, Google Cloud Platform

EXPERIENCE

University at Buffalo

Buffalo, NY

Research Assistant

Feb 2024 - Present

- Spearheaded the integration of **sentiment analysis** capabilities into chat interface prototypes, aiming to empower individuals with disabilities to engage effectively in online conversations.
- Implemented custom mapping techniques to adapt existing emotion labels to a refined set of 5 distinct emotional categories, enhancing the granularity and relevance of sentiment analysis predictions.
- Fine-tuned sentiment analysis models utilizing **Python** and **Large Language Models (BERT, RoBERTa)** to accurately predict 5 nuanced emotion labels from conversational utterances.

Tata Consultancy Services

Bengaluru, India

Software Engineer

Aug 2021 - Jul 2022

- Managed operations of CA PAM, a privileged access manager, for a leading Swiss bank, resulting in smooth operations for over 4000 clients
- Collaborated in debugging errors occurred during server onboardings. Drafted reports with **SQL**
- Delivered mentorship to colleagues, imparting expertise in server integration workflows, **Bash scripts**, and **Python scripts**, achieving enhanced comprehension and skill proficiency
- Created a **Python script** for optimizing onboarding processes of HPiLO servers in bulk, leading to an outstanding 85% reduction in processing times

Tata Consultancy Services

Bengaluru, India

Software Engineer intern

Jul 2020 - Aug 2020

- Streamlined testing processes by developing 2 applications: a file parser in **Java**, and a web app to aid mobile app testing
- Externalized data from Cucumber feature files with **Java** to a **MongoDB** Database resulting in centralized storage
- Built a dashboard by means of **Angular**, **Typescript**, **Node.js** and **Express.js** to input/modify/delete test data, resulting in intuitive CRUD operations
- Crafted a mobile automation tool with **HTML**, **CSS**, **JavaScript**, **Flask (Python)** and **Appium**, leading to improved mobile app testing

PROJECTS

Restaurant E-menu [Link](#)

Jan 2022 - Present

- A cloud-based online menu management system for restaurants programmed using **Next.js**, **Typescript** **Node.js**, **Express.js** and **MongoDB**
- Designed a password based login system leveraging **Google Firebase authentication**

Information Retrieval Chat-Bot

Nov 2023 - Dec 2023

- A chat-bot, built by indexing 15 novels for a total of over 49000 paragraphs, used to answer questions on novels
- Led efforts in developing backend pipelines on **Google Cloud Platform**, including setting up 5 **microservices** and facilitating communication among the **microservices** via **REST API**
- Coded UI features with **React.js** and set up a prompt classifier service using **Python (Flask)**

Inverted Index Search Engine

Oct 2023 - Nov 2023

- A search engine written in **Python (Flask)** leveraging an inverted index to rank documents on tf-idf scores
- Implemented **information retrieval** techniques to index a corpus of 5000 documents achieving sub 50 ms latency
- Hosted the **Flask** application using **Gunicorn** on the **Google cloud platform**

Data Volume Reduction [Link](#)

Mar 2023- May 2023

- Spearheaded development of a cloud-based application, envisioned in collaboration with **IBM** and the **Enterprise Neurosystem Group** filtering datasets through metadata of individual files. Developed using **Django (Python)**, **Next.js (React.js)**, and hosted on **IBM Cloud**
- Constructed and documented critical backend modules responsible for metadata extraction and parsing