VINEET KALGHATGI

Buffalo, NY | Linkedin | +1 7164006846 | vkalghat@gmail.com | Github | Website

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, Kubernetes, Google Cloud Platform

EXPERIENCE

University at Buffalo   **Buffalo, NY**
Research Assistant (NLP)   Feb 2024 - Present
- Integrated **sentiment analysis** capabilities into chat interface prototypes, to empower disabled individuals to engage effectively in conversations
- Developed custom mapping strategies to refine emotion labels, enhancing sentiment analysis predictions with a concise set of 6 distinct emotional categories.
- Fine-tuned sentiment analysis models utilizing **Python, PyTorch** and **Large Language Models (BERT, RoBERTa)** to accurately predict 6 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
- Troubleshooted errors in server onboardings. Drafted reports with **SQL** to streamline the inventory management
- Mentored colleagues, imparting expertise in server integration workflows, **Bash** scripts, and **Python** scripts, achieving enhanced comprehension and skill proficiency
- Optimized onboarding processes of HPiLO servers in bulk with **Python** scripts, leading to an outstanding 85% reduction in processing times

Software Engineer Intern   Jul 2020 - Aug 2020
- Externalized data from Cucumber feature files with **Java** to a **MongoDB** Database resulting in centralized storage and de-duplication of testing data
- Built a dashboard with **Angular**, **Typescript**, **Node.js** and **Express.js** providing an interface for data management that eliminated redundant CSV files
- Crafted an automation tool with **HTML**, **CSS**, **JavaScript, Flask (Python)**, simplifying 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** enabling restaurant owners to easily manage their online menu making it accessible to customers via a QR code scan.
- Designed an **authentication s**ystem leveraging **Google Firebase** for secure login, signup, password retrieval and email verification.

Retrieval Augmented Generation (RAG) Chat-Bot   Nov 2023 - Dec 2023
- Employed **Apache Solr** to index 50000 documents to achieve fast retrieval with optimized search queries
- Leveraged **Python** and **Large Language Models** to summarize retrieved documents achieving coherent responses
- Set up CI/CD pipelines with **Google Cloud Platform**, to deploy 5 **REST API microservices** written in **Python** and **Flask** facilitating faster integration and release

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 **Python** and **Flask** server 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** that filters datasets through metadata of individual files resulting in lower bandwidth usage
- Developed a module in the **Django** server in **Python** enabling seamless downloading, decompression, and indexing of datasets from diverse URLs, resulting in a robust API
- Developed a module to extract metadata of the stored datasets into a **Pandas DataFrame** and to store it in an **SQLite database** to easily identify and retrieve the various data types and unique values to filter upon