

# VINEET KALGHATGI

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## EDUCATION

### University at Buffalo, The State University of New York

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

Buffalo, NY

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

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

Bengaluru, India

Aug 2017 - Jul 2021

## SKILLS

Languages:	Python, Javascript, Java, Typescript, Go, Bash
Web Technologies:	React.js, Angular, Node.js, Next.js, Django, Flask, Flutter, Express.js
Database:	MySQL, PostgreSQL, 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 resulting in a 25% increase in positive user feedback
- 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 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
- Worked closely with **Java** development teams to understand new features, changes, and bug fixes, ensuring smooth deployment and minimal disruption to production environments
- Mentored colleagues, imparting expertise in server integration workflows, **Bash** scripts, and **Python** scripts, boosting team skill levels by 30% and decreasing troubleshooting time by 40%
- Optimized onboarding processes of HPiLO servers in bulk with **Python** scripts, leading to an outstanding 85% reduction in processing times

### Tata Consultancy Services

Bengaluru, India

#### Software Engineer Intern

Jul 2020 - Aug 2020

- Externalized data from Cucumber feature files with **Java** to a **MongoDB** Database resulting in centralized storage and a 45% reduction in duplicated testing data
- Built a dashboard with **Angular**, **Typescript**, **Node.js** and **Express.js** providing an interface for data management that eliminated redundant CSV files
- Innovated an advanced automation tool using **HTML**, **CSS**, **JavaScript**, and **Flask (Python)**, streamlining mobile app testing processes and saving the QA team 10 hours per week

## PROJECTS

### Dev Diaries [Link](#) | Go, GORM, Gorilla/Mux, MySQL

- Engineered a high-performance backend for a **blog REST API** in Go following the **MVC** framework,
- Architected the database schema consisting of 6 tables in **MySQL**, ensuring the integrity of relations between entities, resulting in a 40% decrease in query times
- Implemented **Bcrypt** password hashing and **JWT** authentication, improving security

### Restaurant E-menu [Link](#) | Next.js, React.js, TypeScript, Node.js, Express.js, MongoDB

- Programmed an intuitive menu management system, simplifying digital menu updates for restaurant owners, averaging 250 monthly visitors
- Designed an **authentication** system leveraging **Google Firebase** for secure login, signup, password retrieval and email verification

### Inverted Index Search Engine | Python, Flask, Unicorn, Google Cloud

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

### Data Volume Reduction [Link](#) | Python, Django, SQLite, Next.js, React.js, IBM Cloud

- 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
- Wrote a module that enabled seamless downloading, decompression, and indexing of datasets from diverse URLs, resulting in a robust API