

Harish Kumar Manepalli

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EDUCATION

University of California, Riverside <i>Master of Science in Computer Science; CGPA - 3.9/4.0</i>	Riverside, CA Sept. 2022 – Mar 2024
National Institute of Technology, Tiruchirappalli <i>BTech. in Instrumentation and Control Engineering</i>	India Aug. 2014 – May 2018

EXPERIENCE

Fidelity Investments <i>Lead Full-stack developer Full stack development</i>	Jul 2018 – Aug 2022 Bengaluru, India
<ul style="list-style-type: none">• Gained over 4 years of experience in: writing clean, scalable, code; developing front-end and back-end features following design patterns for large-scale applications; working with product owners to gather project requirements, conducting peer code reviews.• Implemented Lazy Loading on a business facing admin home page reducing the page load time from 80 seconds to less than 20, by rendering essential subject area level data and confining the reminder of the data to on-demand• Developed various loosely coupled software components and microservices and used Kubernetes to deploy these services to the AWS cloud to increase performance, reliability, scalability, robustness, and security of our systems• Implemented a Python text extractor to extract trade information from employees' quarterly report PDFs for checking employee compliance, thereby streamlining a manual process. This was estimated to save the organization a few million dollars• Conceptualized and built a decision tree chat bot which has a Natural Language Processing (NLP) package to assist users in finding appropriate requests and minimizing erroneous request, decreasing average ticket volume by 15%• Devised a solution that automates request queue ticketing problem and scheduled a Jenkins job, saving the company at least 2000 hours of manual effort each year• Created a sentiment analysis model that was incorporated into the KPI Dashboard, allowing business owners to track customer sentiment across user-facing applications, benefiting over 10 million customers	

iB HUBS <i>Software Engineer Intern web development and mobile development</i>	May 2017 - Jul 2017 Hyderabad, India
<ul style="list-style-type: none">• Developed a production-ready web and mobile applications (both iOS and Android) akin to JIRA in just 8 weeks. The majority of my efforts were devoted to creating a responsive and inclusive user interfaces	

PROJECTS

Topic Modeling	Apr 2023 - Jun 2023
<ul style="list-style-type: none">• Analyzed different topic modeling models for research paper abstracts using the prominent methods: TF-IDF, BERT, LDA, BERT+LDA. The BERTopic model performed well in terms of coherence (0.65) and silhouette score (0.52), indicating strong semantic similarity among words in the topics, and well-separated topic clusters.	
Hazard Free Navigation	Apr 2023 - Jun 2023
<ul style="list-style-type: none">• Developed a web application that avoids crime hotspots and directs users through a safer path in SF City. Generated 1000 hotspots from the crime dataset using DB Clustering. Employed OSMnx to extract street network from OpenStreetMap and removed hotspot nodes, shortest path was calculated with A* Heuristic Algorithm	
Web Search Engine	Jan 2023 - Mar 2023
<ul style="list-style-type: none">• Scraped 500MB sports articles. Used PyLucene to remove stop words and create an optimised index, and searched on this index with user query for relevant pages. Leveraged BERT to generate embeddings of the data, and the query embeddings. They were compared using cosine similarity to retrieve the most relevant data.	
Designed and built a Web Application, NITTSTER	Dec 2017 - Feb 2018
<ul style="list-style-type: none">• Aggregates the lecture notes, video references, discussions, and materials to improve the students' learning experience which was (then) consumed by around 2000 students in my college	

SKILLS

Programming Languages: Java, C, C++, C#, Python, SQL, PHP, PL/SQL, JavaScript, TypeScript, HTML, CSS
Technologies/framework: Spring, Spring Boot, Angular, React, React Native, Node.js, Django, Flask, Amazon Web Services(AWS), REST APIs, Kafka, Jenkins, Docker, uDeploy, Junit, JIRA, GIT, .Net, SOAP
Course Work: AI, Data Mining, Distributed Systems, Deep Learning, Machine Learning (ML), Information Retrieval

OTHER EXPERIENCE

- Applied Large Language Models (LLMs), deep learning frameworks and libraries (PyTorch, TensorFlow) to develop ML models. Implemented transfer learning strategies, effective regularizers and Data augmentation strategies and attained state-of-the-art model accuracies of over 95% for a range of NLP and Computer Vision tasks