ABHISHEK KUMAR

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SKILLS

Languages : (**Proficient**) Java, Python, C++, SQL, (**Familiar**) Go, ReactJs, JavaScript, HTML/CSS
Tools : Redis, Git, Docker, Kafka, Spring, Maven, Tomcat, Jenkins, Flask.
Database : Postgres, MySQL, DynamoDB, Oracle, Elasticsearch, Solr
IDE/ OS/ Cloud : VS Code, IntelliJ, PyCharm, Eclipse, Linux, MacOS, Windows, AWS, Azure, GCP.

WORK EXPERIENCE

Research Assistant, IAD (SemaFor SRI-UB team) Sept 2022 – Aug 2023

- Built highly scalable analytic components in docker that accepts json test probes and outputs score graphs.
- Utilized SemaFor test harness APIs to read input graphs and scan for attached text or image media.
- Performed data cleaning, preprocessing, sorting, and analysis on online news data.
- Created configuration scripts and docker files to automatically build and configure testing systems.
- Designed continuous integration and deployment pipelines in Gitlab to reduce delivery speed by 20%.
- Developed a tool that can perform controlled word replacements in long texts using Python, SpaCy and NLTK.
- Implemented entity mismatch and contradiction detection algorithms to detect inconsistencies in news articles.

Teaching Assistant, (CSE 701/702) , University at Buffalo June 2022 – Aug 2022

- Guided students to develop video analysis projects in sports domain with ML design patterns.
- Conducted classes, graded assignments, and reviewed students' technical presentations.

Software Engineer, Infosys Feb 2018 – Aug 2020

- Developed an employee task delegation system to manage production workflow data using Python and React.
- Built REST API to parse delegation data from JSON files received in hourly batches with Flask and Python.
- Designed scripts to extract, parse and transfer millions of parts data across 6 pricing interfaces using PLSQL.
- Reduced batch transfer failure rate by 20% by automating and monitoring batch jobs using RPA and Appworx.
- Built pricing page that shows available dependent and independent part prices from our database in Java.
- Reviewed codes with best practices of readability, design patterns, reliability, security, and performance in mind.
- Mentored teammates by sharing my expertise in formal and informal knowledge sharing sessions.
- Participate in Agile software development including daily stand-ups and sprint planning.
- Managed deployment and maintenance pipelines for system availability and reliability using Jenkins and Git.

EDUCATION

Masters in Computer Science and Engineering, (University at Buffalo, GPA - 3.72/4.0) Sept 2021 - Aug 2023

- **Courses** : Large Scale Distributed Systems, Design and Analysis of Algorithms, Information Retrieval.

PROJECTS

Movie Review Application, (Java, Spring Boot, MongoDB, React JS) [Github]

- Architected a dynamic movie review platform that enables users to watch movie trailers and submit reviews.
- Designed RESTful backend server for persistent review storage in online database.

News Broker, (Python, Flask, MySQL, Docker) [Github]

- Engineered a scalable publisher subscriber system that asynchronously transfers news articles to subscribers.
- Connected the distributed system using event based routing for efficient communication between broker nodes.

Reddit Chatbot, (Python, React, Elasticsearch, Google Cloud Platform, Vercel) [Github]

- Created a highly efficient retrieval-based chatbot on self-curated reddit dataset collected using Pushshift API.
- Implemented embedding based query matching for ranking and co-reference resolution to maintain short context.

URL Shortener Service,(Go, Docker, Redis) [Github]

- Developed URL shortening microservice to convert lengthy URLs into short shareable links.
- Leveraged Redis for data caching and enforced rate limiting based on user IP address to prevent abuse.

JSON-like Database,(Go) [Github]

- Constructed a document database which can perform CRUD operation with high horizontal scalability.
- Efficiently handled race conditions and data integrity issues during data read and writes by using mutexes.

CERTIFICATIONS

- Problem Solving Using Computational Thinking, University of Michigan (Coursera), Apr 2021
- Problem Solving (Intermediate) Certificate, HackerRank, Sept 2020