Vinay Kudari

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RELEVANT SKILLS

Python, JAVA, SQL, *Django, Spring Boot, PySpark, Docker, Kubernetes, Git, Redis, Kafka, Jenkins*, **GCP, AWS**

EXPERIENCE

Gap Inc   San Francisco, CA
*Sr. Software Engineer | **java, spring boot, graphql, langchain, llm, k8s, chatbot***   *July 2023 - Present*
  - Engineering a low-latency LLM-based information retrieval system to extract data from a heterogeneous, multi-source large document corpus
  - Leading the development of a GraphQL based data access layer to retrieve data from a data lake

Amazon Web Services   Palo Alto, CA
*Software Development Engineer | **cdk, dynamo, glue, lambda, sqs, vpc, serverless***   *Dec 2022 - June 2023*
  - Designed and published an internal query builder python package (ZenQL) tailored for AWS Healthlake
  - Designed an event-driven server-less system using AWS services, allowing for parallel execution of tasks, resulting in seamless scaling to handle concurrent requests and improved processing throughput
  - Designed and optimized complex SQL queries in Athena resulting in a 40% reduction in query execution times
  - Architected near real time data processing system using AWS CDK, leveraging PySpark for ETL transforms on multi-terabyte healthcare data sets

Playstation   San Francisco, CA
*Software Development Intern | **java, kafka, concurrency, async, no-sql, cassandra***   *May 2022 - Dec 2022*
  - Worked on auto follow feature for PS5 Explore Hub. Message queues and REST endpoints were developed
  - Learned custom framework and leveraged asynchronous programming pattern to optimize the latency by 60%
  - Developed a cross platform CLI tool to automate generation of grafana analytical dashboards from logs
  - Integrated Hibernate into LEGO framework; Transformed and optimized raw SQL to HQL queries

Brave Orbit   Capetown, South Africa
*Full Stack Developer | **rest-api, django, mobile-app, pytest, redis, gcp, k8s***   *Jan 2020 - Aug 2021*
  - Programmed a cross-platform app using BLoC pattern, implemented database, network and state management layers
  - Engineered HIPAA compliant scalable async push notification service for medication reminder application
  - Developed a task scheduler for clinical surveys that delivers email, SMS alerts and gathers response on a recurring basis
  - Architected a custom ERP system with multi-product substitutions and combo-product life cycle tracking features
  - Setup Kubernetes CI/CD workflows to automatically test, build and deploy backend services on cloud
  - Streamlined automated testing pipelines and improved test coverage for both frontend and backend services

Accenture   Bangalore, India
*Big Data Developer | **redshift, pyspark, emr, sage maker, s3***   *Sep 2018 - Dec 2019*
  - Performed time series analysis on drug assay data to identify raw materials that effect the drug quality
  - Designed ETL data validation pipeline using micro service architecture; Manual testing resources were cut by 70%
  - Developed PL/SQL procedures to generate parent child hierarchies using temporal drug life cycle data

PROJECTS

- **Open-source contributions (nlp, open-source)**: Core contributor to HuggingFace Datasets official repository

- **Distributed key-value store (distributed systems)**: Developed redis-like distributed key-value store with a focus on achieving strong consistency and fault tolerance using the RAFT consensus algorithm

- **Full text search engine (search, nlp, information-retrieval)**: Developed a query parser to transform search query into boolean expression; Optimized the text retrieval by creating inverted index and performed batch processing.

- **Unordered image stitching and deghosting (vision, image matching)**: Estimated approximate overlap area by minimum variance technique on binarized images; stitched images based on binary tree model; removed deghosting from the overlap areas by selecting regions based on minimum local gradients

- **Deep learning based serverless rest api (vision, rest-api, cloud-run, ci/cd)**: Created synthetic face mask dataset and developed automated pipeline to build, test and deploy trained model in a docker container to google cloud run

EDUCATION

University at Buffalo [3.9/4.0 GPA]   Buffalo, NY
Master of Science in Computer Science (AI/ML Specialization)   *Sep 2021 - Dec 2022*
Courses: *Data Structure & Algorithms, Distributed Systems, Computer Vision, NLP, Deep Learning, Big Data Systems, RL*
Research: *Finding inconsistency between text and related images, advised by Prof. David Doermann*

National Institute of Technology, Durgapur [3.3/4.0 GPA]   West Bengal, India
Bachelor of Technology in Computer Science and Engineering   *July 2014 - May 2018*
Courses: *Operating Systems, Computer Architecture, Networking, Database Management Systems, Compilers, Digital Image Processing*
Thesis: *Gender Classification using CNN advised by Dr. Dakshina Ranjan Kisku*