Vinay Kudari

https://vinaykudari.me

vkudari@buffalo.edu
+1-469-943-6778

Profile: Masters student who has been developing software systems for over 5 years and professionally for 3.5 years. Vinay has experience leading projects with vague requirements and known for writing clean maintainable code.

RELEVANT SKILLS

Python, Go, JAVA, SQL, *Django, Flask, PyTorch, PySpark, Docker, Kubernetes, Git, Redis, Kafka*, **GCP, AWS**

EXPERIENCE

- **Playstation (Sony)**   San Francisco, CA
  *Software Development Intern | **java, kafka, concurrency, async, no-sql, cassandra***   *May 2022 - Present*
  - 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 optimise the latency for 1M QPS traffic
  - Developed a cross platform CLI tool to automate generation of grafana analytical dashboards from logs

- **Brave Orbit**   (Remote) 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, pandas, aws, distributed-systems***   *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

- **Visakhapatnam Port Trust**   Visakhapatnam, India
  *Computer Vision Intern | **opencv, scikit-learn, numpy, video processing***   *May 2017 - July 2017*
  - Extracted frames from surveillance cameras; merged them based on SIFT keypoints and RANSAC; trained a SVM to detect cargo type and estimate lease area; developed a motion detector model to identify suspicious movements

PROJECTS

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

- **Recommender system using graph neural networks (gnn, deep-learning)**: Developed an inductive matrix completion model using user-item node embeddings pretrained on movie reviews; 1-hop sub graphs are used to forecast ratings

- **Computer vision based vehicle damage detector api (vision, rest-api, django, pytorch)**: Trained an instance segmentation model to detect damages; assigned a health score based on relative area of damage and deployed as an api

- **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

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

- **Information extraction as seq2seq task (nlp, transformer, text2text)**: Transformed labelled structured data into text; finetuned T5 model to generate text and extracted entities using REGEX

- **Abstractive text summarization of tabular data (nlp, transformer)**: Flattened tables into sequence of words, preserved structure using key:value format; Explored various text2text models to generate summary of news articles

- **Deep learning based serverless rest api (serverless, 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

- **Reinforcement learning based crypto trading bot (time-series)**: Designed a continuous action space OpenAI gym environment to handle trading data; LSTM with CNN was used as function approximator to actor critic algorithms

EDUCATION

- **University at Buffalo [3.95/4.0 GPA]**   Buffalo, NY
  Master of Science in Computer Science (AI/ML Specialization)   *Sep 2021 - Present*
  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*

PUBLICATIONS

- **Time series analysis of civil unrest using Graph Neural Networks @ COLING 2022 (In Review)**: