Vinay Kudari

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Summary: Masters student with 3.5 yrs of software dev experience who is passionate to convert ideas into products

Relevant skills

Python, SQL, JAVA, Django, Flask, PyTorch, PySpark, Docker, Kubernetes, Git, OpenCV, Pandas, GCP, AWS

Experience

- **Sony (Playstation)** — San Francisco, CA
  Software Development Intern | ***java, spring, kafka, grafana, grpc, no-sql, cassandra*** — *May 2022 - Present*
  - Working on a backend service which publishes hints to the online PS5 users dynamically based on the game context
  - Porting monolith news publisher service into micro services using gRPC based custom built framework
  - Building grafana analytical dashboards to visualize service performance charts derived from over 100M active users
- **Brave Orbit** — (Remote) Capetown, South Africa
  Full Stack Developer | ***python, django, flutter, pytest, redis, celery, gcp, k8s*** — *Jan 2020 - Aug 2021*
  - Developed 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
  - Developed a ERP system, custom features such as multi-product substitutions, combo-products are developed
  - Kubernetes CI/CD workflows were setup to automatically test, build and deploy backend services on cloud
  - Developed automated testing pipelines and improved test coverage for both frontend and backend services
- **Accenture** — Bangalore, India
  Big Data Developer | ***python, redshift, pyspark, pandas, aws, distributed-computing*** — *Sep 2018 - Dec 2019*
  - Time series analysis was performed 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%
  - PL/SQL procedures were developed to generate parent child hierarchies using temporal drug life cycle data
- **Visakhapatnam Port Trust** — Visakhapatnam, India
  Computer Vision Intern | ***vision, opencv, video processing, scikit-learn*** — *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

- **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
- **Custom car controller app (full-stack, mobile-app, fastapi, webrtc)**: Assembled the car with Jetson Nano; Cross-platform mobile app and controller service was developed to control the bot over network

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, Computer Vision, NLP, Deep Learning, Big Data Systems, Reinforcement Learning*
  Research: *Working at A2IL lab on projects related to NLP and Computer Vision, 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)**: