

Vinay Kudari

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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 CVIP, 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

RELEVANT SKILLS

Python, SQL, JAVA, Django, Flask, PyTorch, PySpark, Docker, K8s, Git, NumPy, OpenCV, Pandas, GCP, AWS

EXPERIENCE [3.4 YRS]

- Sony (Playstation) [3 mon]** San Francisco, CA
• *Software Development Intern | java, spring, kafka, grafana, grpc, no-sql, cassandre* May 2022 - Present
 - Working on a service which publishes hints to the online PS5 users dynamically based on the game context
 - Porting monolith news publisher service into a async service using gRPC based custom built framework
 - Building grafana analytical dashboards to visualize service performance charts derived from over 100M active users
- Brave Orbit [1.6 yrs]** (Remote) Capetown, South Africa
• *Full Stack Developer | python, django, flutter, pytest, redis, async, gcp, k8s* Jan 2020 - Aug 2021
 - Developed a cross-platform app using BLoC pattern, implemented database, network and state management layers
 - Designed 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 [1.3 yrs]** Bangalore, India
• *Big Data Developer | python, redshift, pyspark, pandas, aws, scikit-learn* Sep 2018 - Dec 2019
 - Time series analysis was conducted on drug assay data to identify raw materials that effect the drug quality
 - Designed ETL data validation pipeline using microservice 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 [3 mon]** Visakhapatnam, India
• *Computer Vision Intern | opencv, computer vision* 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

SELECTED 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 subgraphs around user, item pairs are generated and passed to MLP regressor to forecast ratings
- Computer vision based vehicle damage detector | rest api, django, pytorch:** Trained an instance segmentation model using detectron2 to detect damages; assigned a health score based on relative area of damage
- Unordered image stitching and deghosting | image processing/matching, data structures:** 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
- Information extraction as seq2seq task | transformer, text2text:** Transformed labelled structured data into text; finetuned T5 model to generate text and extracted entities using REGEX
- Microservice based deeplearning inference pipeline | docker, cloud-run, automation:** Exposed ResNet model in a docker container; setup automated CI/CD pipeline to build and deploy as serverless REST API
- Reinforcement learning based crypto trading bot | time series, rl:** Designed OpenAI gym for time series data; LSTM with CNN was used as function approximator to actor critic algorithms

PUBLICATIONS

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