Ganesh Prasad Shivakumar

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EDUCATION

Northeastern University, Boston, MA

GPA: 4.0/4.0

Master of Science - Computer Science

Expected Jan 2024

Courses: Algorithms, Programming Design Paradigms, Natural Language Processing, Machine Learning, Deep Learning

Sri JayaChamarajendra College of Engineering, Mysore, India

GPA: 9.2/10.0

• Bachelor of Technology - Electronics and Communication

2011 - 2015

SKILLS SUMMARY

DBs & CICD tools

Languages Frameworks Tools Java, Python, GoLang, Bash, C++, Javascript, NodeJS, ReactJS, Redux, NextJS, R Lang

Tensorflow, Keras, Torch, Django, Gunicorn, Flask, Numpy, Pandas, Jupyter

Kafka, Kinesis, Zookeeper, Spark, Grafana, Kubernetes, Docker, ELK-Stack, Prometheus, Flink DynamoDB, MongoDB, MySQL, dGraph, AeroSpike, Redis, Travis, Github Actions, Jenkins, Coursera Neural Networks and DeepLearning, Udemy Certified Kubernetes Administrator

Certifications
EXPERIENCE

Graduate Teaching Assistant at Northeastern University

Boston, US | 2022 - 2023

• Working as a Teaching assistant for Machine Learning Course under **Prof. Virgil Pavlu.** Authored assignments and conducted office hours for helping 150+ graduate students in understanding and coding Machine Learning Algorithms problems.

Software Developer at Amazon

Seattle, US | May, 2023 - Sept, 2023

• Contributed to the redesign of key data plane components, leading to improved data partition parsing efficiency. This initiative successfully reduced pagination response time from 5 seconds to just 0.9 seconds. (Stack: Amazon SageMaker, Glue, Java)

Software Developer at Amazon Robotics

Boston, US | Jan, 2023 - May, 2023

• Designed and implemented data pipelines for processing data that handle planning and allocation of packages. This project reduced the latency of planning from 5mins to 2secs and gained recognition by the whole org.(Stack: Kinesis, SNS, SQS)

Unbxd Inc., A Netcore Company

Bengaluru, India | 2015 - 2021

• Software Developer-2 in Search team

Nov, 2017 - Dec, 2021

- O Built a service which acts as a source of truth for the e-commerce catalog of any indexed sites, used for **Differential Indexing**. This application removed the overhead of internal search calls. (Stack: **Java 11**, **dGraph**, **AeroSpike**, **Pippo**, **Kubernetes**)
- o Developed an application that validates e-commerce catalog's product schema by using **schema.org** standards. This helped in **auto-generating schema and detecting any datatype anomalies** in the catalog. (Stack: **Java, Mongo, GoogleGuice**)
- Created an auto scalable platform to fetch and index catalog from one e-commerce platform to other. App built on Argo workflow where the Kube pods will be rolled up as per the load. (Stack: Python, Django, Celery, PostgreSQL)
- o Built a self-scalable solution for hosting SOLR cloud clusters and auto recovery from various outage scenarios. This took care of JAVA GC outages and reduced overhead for SOLR maintenance.(Helm, Kubernetes, GitActions)
- Built vertical specific statistical & LSTM/CNN/CRF neural network models for Entity recognition from search query. This can even identify factors that had a significant impact on the relevance of almost 90% of e-commerce queries.
- Refactored fail safe **Query Processing Layer** to incorporate all the query rewrites and reformulations. This refactorization helped in terminating 5 services and respective resources. (Stack: **Golang, Enovy Proxy, Protobuf, GoFlow**)

• Software Engineer

Jan, 2015 - Nov. 2017

- Part of team where we designed and built AI model orchestration layer on top of Kubeflow Pipelines for train/tune/validate/deploy use cases of models like NER, Personalisation.
- Designed and deployed a fail safe catalog upload scheduler system, which is built on top of Mesos cluster. This app handles catalog indexing of 70% customers, which also supports adhoc catalog indexing. (Stack: Python3, Chronos, Zookeeper)

PROJECTS

• MultiModal Outfit Compatibility and Generator with Neural Networks

- Outfit generation given multimodal inputs from the user. Bi-LSTM model is used for outfit prediction which is trained on the 20000 outfits data. Resnet-50 is used for image feature extraction. Document embeddings were mapped to create VSE.
- Through Visual semantic embeddings we were able to support multimodal inputs from the end user to predict outfits based on image and text.

• Multilingual Question Answering using Transformers

Created sequence-to-sequence Transformer model, trained on English-to-Regional language machine translation task done using **Keras**. Used **BERT transformer models** for multilingual questions and generate answers wrt the required regional language.