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Skills

TOOLS

Git
GitLab
Bash
Docker
Nginx

DATA SCIENCE LIBRARIES

PyTorch
Pandas
Numpy
Scipy
Matplotlib
OpenCV
Anaconda
spaCy
scikit-learn

DATABASES

MySQL
Blazegraph
AWS Neptune

CLOUD

Amazon Web Services - AWS
Google Cloud Platform - GCP

LANGUAGES

Python
Java
SQL
SPARQL

WEB DEVELOPMENT

Flask
Springboot
Angular
HTML
CSS

Certifications

AWS Certified Solutions Architect - Associate 2019 to 2022

AWS Certified Developer - Associate 2020 to 2023

AWS Certified SysOps Administrator - Associate 2020 to 2023

Education

Rochester Institute of Technology
Master of Science Computer Science
GPA : 3.64

Aug. 2017 to Dec. 2020

University of Pune
Bachelor of Engineering Computer Engineering
Grade : First Class

Aug. 2012 to May 2016

Experience

Machine Learning Engineer Intern
Siemens

Orlando, Florida
Jan. 2020 to May 2020

- **Project - Internal Data Analytics Platform - RStudio Team + AWS Sagemaker**
- Architected & configured RStudio Server Pro, Connect and Package Manager on EC2 Ubuntu server with Jupyter Lab and Jupyter Notebook launcher integration enabling a cloud based model development space.
- Integrated authentication using PAM Authentication.
- Configured reverse proxy on the server using Nginx for persistent RStudio user sessions along with SSL integration for secure access.
- Built training and inference Docker images for custom R based time series forecasting use cases to enable scalable model training and model deployment using AWS Sagemaker's Bring Your Own Algorithm / Container feature.
- Developed python scripts using Sagemaker SDK for deploying models using batch transform to serve predictions on-demand enabling cost savings relative to deployment using always-on model endpoints.

Software Developer Intern
Siemens

Orlando, Florida
May 2019 to Dec. 2019

- **Search Application for Knowledge Graph** - Developed RESTful API for a keyword recognition based serverless search application to provide answers to user's questions from a RDF graph database in AWS. (Tools - Python, Java, spaCy, Apache Jena, Flask, Springboot, AWS Lambda, API Gateway, Neptune, S3, Angular)
- Designed and developed all modules with OOP from scratch such as Orchestrator, Keyword Recognizer, Indexer, Query Builder, Query Executor.
- **Database Migration** - Migrated production dump of graph database from Blazegraph to AWS Neptune to mitigate security concerns and move to a cloud based RDF triple store.
- **Cloud Resource Management** - Implemented API for a resource scheduler tool with features such as auto start-shutdown (cron job and cloudwatch alarms) and manual start-stop triggers for users to control EC2 instances without logging into AWS console for a total cost saving of 87% relative to always-on EC2.

Teaching Assistant and Grader - Computer Vision
Rochester Institute of Technology

Rochester, New York
Jan. 2019 to May 2019

- Conducted session and prepared a step-by-step lab on PyTorch to teach students how to use the library.
- Graded homework assignments and assisted students with questions regarding the topics covered in class.

Projects

Performance and Deployment of Deep Neural Net on Edge Devices 2020

- Deployed InceptionNet and MobileNet on Raspberry Pi 4 while measuring performance on metrics like accuracy, file size, CPU and Memory usage, latency.
- Improved performance across all metrics while maintaining accuracy using techniques like quantization, weight clustering and weight pruning.

Turn and Stop Detection with Vehicle GPS Data 2019

- Implemented a program to convert GPS sensor data to KML for visualization on Google Earth.
- Implemented a rule based classifier for left-right turns and stop detection based on angle and speed of the vehicle.
- Created with - Python, simplekml, Pandas

Multi-core, Cluster, GPU and Map-Reduce Projects - <https://bit.ly/2IJBf8B> 2018

- Developed parallel computing programs to solve large mathematical problems demonstrating strong scaling and weak scaling.
- Created with - Parallel Java 2, Java, C

Transfer Learning using VGG 16 and LeNet 5 2018

- Adapted pre-trained models to work with Fashion MNIST dataset and improved accuracy by fine tuning the networks to yield accuracy of 91% with VGG-16 and 86% with LeNet5 pre-trained on MNIST.
- Created with - PyTorch, Matplotlib