Surapaneni Yogesh

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Links
- GitHub **yogesh174**
- Linkedin **Surapaneni Yogesh**

Research Interests
Machine Learning and Deep Learning
Data Pipelines
Fog and Edge Computing
Cloud Computing
Networks

Career Objective
To work in an environment where I can always question what, how & why and at the same time expand my knowledge and skills in a way useful to the community.

Education

UNIVERSITY OF HYDERABAD
Integrated MTech in Computer Science
Jul 2024 · Hyderabad, India

Skills

LANGUAGES
C • Python • Bash Shell • Java • PHP • Dart • SQL

ML LIBRARIES
Numpy • Pandas • scikit-learn • TensorFlow • Pytorch

DEVOPS
Docker • Podman • Docker Swarm • Kubernetes • Openshift • Jenkins • Git • GitHub • Ansible • Terraform • Prometheus • Grafana • Linux

CLOUD AND BIG DATA
AWS • GCP • Azure • HDFS • Hive • Kafka

WEB FRAMEWORKS
HTML • CSS • JavaScript • jQuery • Node • Express • Flask • React • Svelte • SvelteKit • Strapi

MISCELLANEOUS
Raspberry Pi • Jira • Trello • LaTeX

Experience

MACHINE LEARNING RESEARCH INTERN
SolutionsAdda
Dec 2022 - Feb 2023 · Hyderabad, India
- Trained SVM and TwinSVM models on CICIDS 2017 dataset.
- Deployed the models in eBPF which filters the packets in kernel space.

DEEP LEARNING RESEARCH INTERN
University of Hyderabad
Jun 2022 - Aug 2022 · Hyderabad, India
- Compared optimizers for neural networks in a distributed environment.
- Implemented ADMM optimizer in Akka (distributed computing framework in java).

ASSOCIATE CLOUD ENGINEER
Continuuminnovations Private Limited
Sep 2021 - Mar 2022 · Remote
- Automated the deployment process with Azure pipelines and Azure Kubernetes Service upto 90%.
- Migrated 80% of workload from AWS to Azure.
- Managed and Debugged AWS workloads in elastic beanstalk environment.

DEVOPS ENGINEER INTERN
Saaspect Private Limited
Jul 2021 - Aug 2021 · Remote
- Learned multiple new AWS services and features of web servers.
- Created bash scripts to create and manage resources on AWS using the aws-cli tool.

DEVOPS ENGINEER INTERN
PaprClip Technologies Private Limited
May 2021 - Aug 2021 · Remote
- Dockerized the backend API written in Flask.
- Performed cost optimization analysis in AWS which included exploring various services(ECS, EKS, Lambda with SAM) and load testing each one of them to find the most appropriate infrastructure.
- Automated deployment to AWS environment with GitHub actions.

External Training

ARTH PROGRAM
LinuxWorld Informatics Pvt Ltd
Sep 2020 - Sep 2021 · Remote
- Enrolled in the program during the pandemic period which provided me with knowledge of DevOps tools from a very basic level to an advanced level. This really helped me bag the internships in DevOps and Cloud engineer roles.

ARTIFICIAL INTELLIGENCE FOUNDATION
UpX Academy
Jan 2020 - Dec 2020 · Remote
- Armed me with knowledge of Data Analysis, Data Processing, Machine Learning algorithms, Deep Learning architectures, Natural Language Processing, and Computer Vision. Although the course did not dwell deep into the math it paved a path on what to expect from each of the domains.

Certifications

CERTIFICATION EXAMS
• AWS Certified Solutions Architect - Associate
• Red Hat Certified Specialist in Containers and Kubernetes
• AWS Certified Cloud Practitioner

TRAINING
• Artificial Intelligence Foundation certificate by UpX Tech Mahindra
• ARTH Certificate of Completion by LinuxWorld Informatics Pvt. Ltd

WORKSHOPS
• Kubernetes use cases demonstration by Industry experts certificate of participation by LinuxWorld Informatics Pvt. Ltd
• OpenShift practical demonstration by Industry experts certificate of participation by LinuxWorld Informatics Pvt. Ltd
• Microsoft Azure Workshop certificate of participation by LinuxWorld Informatics Pvt. Ltd
• Git & GitHub - Best Source Code Management Tool certificate of participation by LinuxWorld Informatics Pvt. Ltd
• Ansible use cases demonstration by Industry experts certificate of participation by LinuxWorld Informatics Pvt. Ltd
• Docker expertise certificate by IIEC community
• Artificial Intelligence Enabled Machine to help fight against pandemic workshop's certificate of participation by IIEC-RISE community

COMPETITIONS
• Web developer essentials (stage 1) certificate by Crio winter of doing
• Full Stack Mini Project - XMeme (stage 2) certificate by Crio winter of doing
• Flipkart GRiD 4.0 (Level 1) certificate by participation by Unstop

Personal Information
Languages: English, Telugu, Hindi
Interests: Tennis, Table Tennis, Badminton, Swimming, Running, Chess, Anime

Extra Activities

Cloud and Smart Labs | University of Hyderabad

📅 Sep 2021 – Oct 2022   📍 Hyderabad, India

• Started with general IoT, Fog and Edge Computing concepts and experimented with pub/sub protocol which is formalized by MQTT protocol. Used "EMQ X" broker because of its performance and its support for light weight edge computing.
• Played around with AWS IoT services and simulated devices to set up basic architectures.
• Went into the theory of API vs Event-driven architecture and stream vs batch processing. Used MQTT in combination with kuiper (a stream processing software) to build a pipeline to aggregate data.
• Tried integrating ML (using TensorFlow lite) with the pipeline but faced compatibility issues.
• Learnt DevOps concepts - Ansible, Docker, Docker Swarm and a bit of TOSCA to collaborate with a Masters student's project. Proposed and implemented a basic Jinja templates solution to generate the services files from a template on the fly.
• Learnt Kubernetes and setting up OpenFaas on top of it to collaborate with a PhD scholar's project. Helped debug errors while setting up a pipeline with object detection serverless function and MinIO.
• Learnt Akka framework and Neural Networks to collaborate with a Masters student's project. Implemented ADMM as an alternative to the Asynchronous SGD in the distributed environment of Akka.

Key Side Projects

• Scraped data off the web on features of houses and its associated rents to create a model that predicts the rent of a house given the features. Also created an API for the same using Flask and deployed it to Heroku.
• Developed a Python-based CLI Menu program with my team that helps you manage AWS resources & services, Docker containers & images and also helps you run some of the most commonly used Linux commands. In addition to this, it offers an option to set up an entire HDFS cluster. This helped greatly reduce the effort required to manually type out the commands. Link to the project.
• Implemented a web interface for the above menu in Svelte. Link to the project.
• Contributed Ansible roles to Ansible Galaxy that provision EC2 instances on AWS cloud and set up a multi-node Kubernetes cluster over them using dynamic inventory. Link to the project.
• Implemented UDP protocol and multi-threading concepts to develop a chat application in python. Link to the project.
• Integrated AWS EC2 and RDS services to set up a WordPress application. Link to the project.
• Utilized LVM concepts to solve the challenge of providing elasticity to the HDFS storage cluster. Link to the project.
• Created a full stack application in which one can post and view memes with Flask as the backend, React as the front end and MySQL as the database. Link to the project. (Currently the backend is down)
• Developed management systems - Library management system, Hostel management system and Online class tutoring system as a part of Internet Technologies course mega project. Link to the project.
• Designed beautiful interfaces and coded them as part of Internet Technologies course mini project. Link to the project.