

# Laxminarayana Vadnala

Portfolio: [laxminarayanaV7416.github.io](https://laxminarayanaV7416.github.io)

Github: [github.com/LaxminarayanaV7416](https://github.com/LaxminarayanaV7416)

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## EDUCATION

- Saint Louis University** St. Louis, MO
  - Masters - Computer Science; GPA: 3.87* *Aug 2023 - May 2025*
  - Courses: Computer Networks, Data Structures, Analysis Of Algorithms, Web Technologies, Machine Learning, Networking, Big Data*

## SKILLS SUMMARY

- Languages:** Python, C++, JavaScript, SQL, Bash, Java (SE8)
- Frameworks:** Apache Spark, Apache Airflow, Apache Kafka, Apache Hudi, Apache Hive, FastAPI, Flask, NodeJS, TensorFlow, Keras, Pandas, ReactJS
- Tools:** Kubernetes, Docker, GIT, PostgreSQL, Redis, Hadoop, Terraform
- Platforms:** Linux, MacOS, Windows, Raspberry, AWS, GCP, Azure, Atlassian JIRA, Postman
- Soft Skills:** Leadership, Event Management, Writing, Public Speaking, Time Management

## EXPERIENCE

- Talent INC** Remote
  - Senior Software Engineer (Full-time)* *Sept 2022 - Feb 2024*
    - Successfully implemented a caching from scratch within the All APIs, which led to a remarkable 60% reduction in application costs. Caching eliminated redundant database queries for the same requests, directly impacting AWS billing.
    - Managed complete data engineering pipelines using Apache Airflow, Spark and Other AWS services from developing to deploying.
    - Authored more than 50000 lines of code, meticulously managed via GitHub, with work progress tracked through the JIRA dashboard.
- Colgate-Palmolive** Hyderabad, Telangana
  - Solution Architect* *Jan 2023 - April 2023*
    - Authored and maintained more than 500,000 lines of Python code, pivotal in constructing data pipelines, REST APIs, and DAGs.
    - Implemented Slow Changing Dimensions (SCD) using the Data Build Tool (DBT), with a primary focus on the SCD-2 paradigm, as it aligns with our interest in tracking change patterns, which significantly influence the calculations.
    - Engineered all pipelines in batch processing mode, given that calculations rely heavily on Time Series Data Analysis.
- Southwest Airlines** Hyderabad, Telangana
  - Solution Architect* *June 2022 - Dec 2022*
    - Authored over 1000 pyspark scripts to construct ETL pipelines, deploying them to EMR Steps and Glue jobs using GitHub Actions. I also designed and developed the CI/CD pipeline as the solution architect.
    - Created Kubernetes YAML configurations for Stateful set deployments, Deployments, Services, and autoscaling resources, including HPA, VPA, and Autoscaling.
    - Developed REST APIs using Fast API, a Python-based web framework, while implementing robust OAuth 2.0 authentication. The application was containerized and deployed on Kubernetes.
    - Successfully migrated approximately 12 Petabytes of data stored in a STAR Schema within the Redshift data warehouse. Data was optimized for cost savings through Gzip compression and stored in columnar formats like Parquet and ORC for expedited data retrieval. Compressed data footprint was reduced to around 4.7 Petabytes, leading to significant data storage cost savings.
- Annalect (Omnicom Media Group)** Hyderabad, Telangana
  - Data Developer* *Oct 2021 - June 2022*
    - Developed 25 Databricks jobs utilizing Apache Spark for efficient data ingestion into the staging area. These jobs handled diverse data types such as XML, Excel, CSV, JSON, Parquet, and more.
    - Designed and deployed Dockerized Airflow environments, hosted on Azure App Services, facilitating job scheduling and monitoring.
    - Orchestrated mail sending processes using the Azure Queue Storage service, allowing efficient queuing of messages for tracking, all of which were initiated by Airflow DAGs.

- Developed a REST service for report generation, leveraging the Pymupdf module to dynamically generate PDF reports.

- **Qualcomm India Pvt Ltd**

Hyderabad, Telangana

*May 2020 - Sept 2021*

*Senior Software Engineer*

- Developed the Mobile Testing Framework (MTFPy), entirely in Python, to streamline the testing process for newly manufactured Qualcomm mobile chips, including various checks such as 4G connectivity, VoLTE connectivity, and flight mode testing.
- Reduced the test case execution time for a single chip from 29 minutes and 32 seconds to just 2 minutes and 26 seconds, executing all 492 test cases.
- Authored and managed approximately 600,000 lines of Python code.
- Led a team of 4 junior developers and conducted rigorous code reviews.
- Implemented design patterns and optimized code execution using advanced search and sorting techniques.

- **Intellect Design Arena Pvt Ltd**

Hyderabad, Telangana

*Oct 2019 - May 2020*

*Senior Software Engineer*

- Developed a PDF parsing tool using OCR which have table parsing capabilities using python and OpenCV.
- Worked on NLP model building where it summarizes, and extract NER tags designed while training the model based on the content extracted from PDF.
- Exposed this work as REST API service using Fast API or Flask Restful framework, where this is managed using JIRA and collaborated with team using GitHub.
- As a Big Data Engineer, responsible for weighing check list automation pipeline. Aircraft is sale will hit this pipeline where this spark job will perform ETL over the data and save in respective database tables.
- Received GEM award for receiving the appreciation from Airbus. Deployed spark job using Jenkins's pipeline, where we ever we get a hit request we update the pipeline and trigger the build with data path and required inputs given while building.

## PROJECTS

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- **Safety Aware Drone Ecosystem (PX4 Simulation Project (Work In Progress))**: Building the Gazebo Plugins for the Drone to facilitate the simulation requirements like Terrain loading on drone fly, Wind Simulation and more.

## HONORS AND AWARDS

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- Rise and Shine Award from Annalect India - Feb 2022
- On Spot Award from Annalect India - May 2022