Niranjan Kumar Gurram

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SUMMARY

Experienced CS graduate with over 3 years of IT experience in designing, implementing, and optimizing scalable data pipelines, full-stack web applications, and cloud-based systems across domains like marketing, telecom, and enterprise analytics. Skilled in developing end-to-end solutions using Python, SQL, Apache Spark, and Airflow, and in building modern web platforms with React, Node.js, and Flask. Proficient in data modeling, API development, and integrating distributed systems using RESTful services and microservices architecture. Strong background in managing structured and unstructured data using MySQL, PostgreSQL, MongoDB, and Hadoop ecosystems. Experienced in deploying solutions on Azure and AWS, with expertise in Terraform, Jenkins, and GitHub Actions for CI/CD and infrastructure automation.Well-versed in Agile methodologies and TDD, with hands-on knowledge of machine learning and deep learning frameworks such as TensorFlow and PyTorch. Adept at translating complex problems into clean, production-ready code that improves system performance and supports business goals. Currently pursuing a Master's in Computer Science with a passion for solving real-world challenges through data and intelligent system design.

AREAS OF EXPERTISE

Programming Languages: C, C++, Python, Java, SQL, JSON.
Web Technologies: HTML5, XML, CSS3, JavaScript, JSP, D3.js, React.
Database: MySQL, Neo4j.
Software Designing: Agile, Lucid Charts, Draw IO, UML, ER Diagrams.
Application Server: Apache Tomcat
Big Data Technologies: Hive, Apache Hadoop, HDFS, AWS.
Analytical Tools: SAS, Excel, JIRA.
Machine Learning & AI: ML, Deep Learning, TensorFlow, PyTorch.
Tools and IDE: Eclipse, PyCharm, Notepad++, Visual Studio, MySQL Workbench, SOAP, Git.
Operating systems: Microsoft Windows, Ubuntu Linux.
Python Framework: Django, Flask.
Architecture Design: Lucid Chart, Draw IO for Data Modelling.
Other: ServiceNow, GitHub Embedded-C, Ubuntu.

WORK EXPERIENCE

Data Engineer | Org: Marketing Product & OPS — India
Data Pro IT, Hyderabad-India. Product: Data Agents & Analytics — **August 2021 – February 2022**
Tools: SQL, Python, Tableau, Spotfire, Excel, Git, GitHub

- Improved dashboard performance by 30% by optimizing and maintaining analytics dashboards, enhancing core business reporting reliability and consistency.
- Accelerated stakeholder data accessibility by 25% through automation and creation of advanced visualizations using SQL, Python, and Tableau.
- Increased data accuracy and insights reliability by 20% by implementing meticulous validation and analytical review processes, directly supporting strategic business decisions.
- Streamlined project collaboration efficiency by 35% through adoption of robust version control and best coding practices using Git and GitHub, enhancing team productivity and workflow management.

Data Engineer | Org: Pipelines & Enablement — India
Tech Mahindra, Hyderabad-India. Product: Automobile Rebate Management — **March 2022 – April 2023**
Tools: Python, SQL, Apache Spark, Apache Airflow, ETL Tools, OLAP, OLTP, DDL, DML

- Designed and developed automated ETL pipelines to manage large-scale telecom data flows, integrating customer, usage, and network data from multiple sources into a centralized analytics platform using Apache Airflow and ETL tools.
- Built and optimized distributed data processing workflows in Apache Spark and Python to support near real-time analysis of call detail records (CDRs), network events, and usage metrics, enhancing the accuracy and timeliness of telecom insights.
- Engineered robust SQL scripts (DDL/DML) for effective data modeling, schema evolution, and seamless synchronization between OLTP transactional systems and OLAP reporting platforms.
- Established comprehensive data validation, monitoring, and quality assurance processes, proactively troubleshooting and resolving data pipeline issues to ensure reliable delivery of telecom KPIs and analytical models.
- Collaborated with telecom domain experts to gather requirements, perform impact analysis, and deploy scalable data solutions that enabled predictive analytics, customer churn modeling, and operational performance reporting.

Software Engineer | Org: Database Optimization & Cloud Infrastructure Management — Remote
Manas Solutions Pvt Ltd, Hyderabad — **May 2024 – September 2024**
Tools: React.js, JavaScript, Node.js, Express, MySQL, PostgreSQL, Azure Cosmos DB, Microsoft Azure, Terraform, Jenkins, GitHub

- Improved front-end performance by 20% by developing and maintaining web applications using React.js and JavaScript, significantly enhancing user experience with faster load times.
- Reduced API response time by 15% through the design and deployment of optimized RESTful APIs with Node.js and Express, enhancing performance for high-traffic applications.
- Enhanced database query execution by 25% by creating and optimizing relational database schemas using MySQL and PostgreSQL, ensuring efficient and rapid data retrieval.
- Enabled automated cloud resource management by collaborating with DevOps teams to implement Terraform scripts, streamlining Microsoft Azure infrastructure provisioning and maintenance
- Reduced software release cycle by 25% by establishing automated CI/CD pipelines using Jenkins and GitHub Actions, accelerating testing and deployment processes.
- Cut data retrieval time by 20% through the adoption of NoSQL databases, including MongoDB and Azure Cosmos DB, effectively managing unstructured data for real-time applications. generate tools.

PROJECT EXPERIENCE

Data Engineer | Olympic Data Analytics using Azure
Tools: SQL, Python, Tableau, Spotfire, Excel, Git, GitHub

- Reduced execution time by 45% through SQL analysis on transformed data, optimizing query performance using Azure Synapse Analytics and SQL.
- Increased report generation speed by 35% by building interactive dashboards, visualizing trends and data-driven insights using Power BI and JavaScript.
- Enabled processing of large datasets up to 50% faster by optimizing data transformations using Apache Spark within Azure Databricks and integrating with REST APIs..
- Reduced unauthorized access incidents by 100% by enhancing data security and governance through implementing Azure Role-Based Access Control (RBAC) and Azure Active Directory.
- Increased report generation speed by 35% by building interactive dashboards using Power BI to visualize trends and data-driven insights

Cloud Computing & Big Data Projects
Tools: Hadoop, Java, MapReduce, Maven, Shell Scripting, Text Processing.

- Improved data processing efficiency by 50% by designing Hadoop MapReduce jobs for large-scale social graph analysis and follower count aggregation.
- Reduced computation time by 40% through distributed matrix multiplication using custom Java Writable classes and optimized MapReduce workflows.
- Boosted ETL throughput and data quality by 45% by implementing customer data cleansing and transformation pipelines.
- Enhanced performance of graph partitioning and clustering tasks by 55% using Maven-packaged Java applications executed in local and distributed environments.

UNIVERSITY EXPERIENCE

Teaching Fellow **January 2025-May 2025**
University of Texas at Arlington (Machine Learning, Deep Learning, Natural Language Processing, Reinforcement Learning)

- Instructed ML & AI Concepts – Taught Neural Networks, Regression Models, **SVM, Decision Trees, CNNs, and RNNs.**
- Led Hands-on Projects – Guided students in image classification, sentiment analysis, and anomaly detection using **Python, TensorFlow, Scikit-learn, and PyTorch**.
- Conducted Coding Workshops – Focused on Jupyter Notebooks, NumPy, Pandas, and Matplotlib for data preprocessing and visualization.
- Optimized ML Models – Provided mentorship on hyperparameter tuning, debugging, and System Verilog-based automated testing.
- Achieved Impactful Results – Increased ML project completion by 20%, improved model efficiency by 15%, and helped students secure top placements in ML competitions.

Operations Manager – IT Support & Communications **August 2023-May 2024**
University of Texas at Arlington (IT Infrastructure, System Maintenance, Technical Support)

- Recognized & Promoted – Awarded Operations Assistant of the Month and promoted to Operations Manager within four months.
- System Administration – Troubleshoot Windows Server login issues and update 30+ systems in parallel using Unix scripts.
- IT Support & Lab Management – Assisted students with laptop rentals, software troubleshooting, and university application servers.
- Technical Operations – Managed computer lab maintenance, equipment shipments, and IT safety protocols under the supervision of the Assistant Director.
- Process Optimization – Enhanced IT response time by 25%, improving system uptime and overall lab efficiency.

EDUCATION

THE UNIVERSITY OF TEXAS ARLINGTON **May 2025**
Master of Science (M.S.), Major: Computer Science and Information Systems |, Arlington, TX
Course work: Design and Analysis of Algorithms, Data Structures,Data Analysis & Managing Techniques, Artificial Intelligence, Web Data Management, Data Mining, Cloud Computing & Big Data, Machine Learning, Software Engineering- II , Numerical Methods.

Vignan's University
Bachelor of Technology(B.Tech), Major: Computer Science | India **May 2023**
Course work: Machine Learning, Cloud Computing, Big Data & Analytics, Artificial Intelligence. Mobile Computing, Cryptography & Network Security, Software Engineering, Computer Networks, Operating Systems, Compiler Design, Web Technologies, DBMS, Data structures, OOPS through Java, C Language.

PROJECTS

Block-Level Data Deduplication for Optimized Storage | Tools: AWS, PyCharm, MySQL Workbench, Chunking Algorithm, SHA 256 Algorithm.

- This project tackles the challenges of storage inefficiency and resource wastage due to redundant data in the big data era. Block-level data deduplication seeks to enhance storage efficiency and management by eliminating duplicate data blocks within storage systems. It also seamlessly uploads deduplicated data to the cloud for enhanced accessibility and backup.

VOLUGRAD | Tools: React, Laravel, Node.js, SQL

- Led a team to Build a volunteer management platform with task tracking, professor dashboards, real-time chat, and security features like 2FA and Captcha. Optimized for cloud deployment, responsive UI, and PWA support.

Facial Insight Attendance Management System | Tools: OpenCV, TensorFlow, Flask, MySQL, HTML5, CSS3, JavaScript.

- AI-driven attendance system using OpenCV, TensorFlow, Flask, and MySQL for automated, accurate tracking. Features facial detection, recognition, secure database management, and a user-friendly UI. Reduced manual efforts and improved efficiency.

Image Captioning in Machine Learning | Tools: CNN, RNN, LSTMs, Transformers, TensorFlow, PyTorch, MS COCO, Flickr30k

- Designed an AI-driven image captioning system integrating CNNs for visual feature extraction RNNs/Transformers for Text generation, Enhanced accuracy using attention mechanisms & evaluated performance on datasets for improved caption coherence.

Loan Eligibility Prediction System using Logistic Regression | Tools: PyCharm, Linear regression Algorithm.

- Developed a Loan Eligibility Prediction System using logistic regression and PyCharm, enabling automated applicant screening for loan approval. This project showcased my expertise in software development, data analysis, and user interface design.

Audience Tracking using URL Shortener | Tools: Node.js, Express.js, MongoDB, HTML5, CSS3, Bootstrap.

- Built a URL shortener with real-time analytics, geographic tracking, and referral insights to enhance data-driven marketing and user engagement.