Niranjan Kumar Gurram

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SUMMARY

- Experienced Computer Science graduate with 3+ years of hands-on experience in building scalable data pipelines, cloud-native applications, and full-stack systems across domains like telecom, marketing analytics, and enterprise reporting.
- Proven expertise in developing robust ETL workflows and data lakes using Apache Airflow, Apache Spark, and Python, enabling near real-time analytics and predictive modeling.
- Skilled in full-stack development using React.js, Node.js, and Flask, implementing RESTful APIs and microservices architecture for high-performance web platforms.
- Proficient in cloud infrastructure provisioning and CI/CD automation using Azure, AWS, Terraform, Docker, Kubernetes, Jenkins, and GitHub Actions
- Strong experience managing both relational (MySQL, PostgreSQL, SQL Server) and NoSQL (MongoDB, Azure Cosmos DB, HDFS) databases; expert in OLTP/OLAP systems, data modeling, and data governance.
- Adept at creating insightful data visualizations and KPI reports using Tableau, Power BI, and Spotfire to support business decision-making.
- Hands-on with Machine Learning, Deep Learning, and NLP, applying tools like TensorFlow, PyTorch, CNNs, RNNs, and Transformers for end-to-end model development.
- Experienced in Agile/Scrum methodologies and Test-Driven Development (TDD), committed to delivering secure, production-ready solutions aligned with business goals.

AREAS OF EXPERTISE

Programming Languages: Python, SQL, Java, C, C++, Shell Scripting, JSON.
Web Technologies: HTML5, XML, CSS3, JavaScript, JSP, D3.js, React,Babel, Webpack, NPM.
Database: MySQL, PostgreSQL, SQL Server, MongoDB, Oracle, Azure Cosmos DB, NoSQL, Neo4j, Snowflake
Software Designing: Agile, Lucid Charts, Draw IO, UML, ER Diagrams.
Application Server: Apache Tomcat
Data Engineering & Big Data Technologies: Apache Spark, Apache Airflow, Apache NiFi, Hive, Hadoop, HDFS, Kafka, Data Lakes, ETL Pipelines, OLTP, OLAP, DDL, DML, Delta Lake.
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

Tech Mahindra, Hyderabad-India **May 2024 – September 2024**
Software Engineer | Product : Cloud-Native Full-Stack Application & DevOps Automation Platform
Tools: React.js, JavaScript, Node.js, Express, MySQL, PostgreSQL, Azure Cosmos DB, Microsoft Azure, Terraform, Jenkins, GitHub

- Developed and optimized web applications using React.js and JavaScript, improving front-end load times by 20%.
- Built RESTful APIs with Node.js and Express, reducing API response time by 15% for high-traffic endpoints.
- Designed and optimized relational databases (MySQL, PostgreSQL), boosting query performance by 25%.
- Automated cloud infrastructure provisioning with Terraform and Azure, supporting Infrastructure as Code (IaC) best practices.
- Implemented CI/CD pipelines using Jenkins and GitHub Actions, cutting release cycle time by 25%.
- Integrated MongoDB and Azure Cosmos DB to support real-time analytics with unstructured data, reducing retrieval time by 20%.
- Integrated application logging and monitoring using Azure Monitor and Application Insights, improving system observability and reducing average incident resolution time by 30%.

Data-Pro IT, Hyderabad-India. **April 2022 – August 2023**
Data Engineer | Product: Telecom Data Engineering & Real-Time Analytics Platform
Tools: Python, SQL, Apache Spark, Apache Airflow, ETL Tools, OLAP, OLTP, DDL, DML

- Developed scalable ETL pipelines with Python, Airflow, and SQL, consolidating telecom data from multiple sources.
- Built distributed data processing workflows using Apache Spark, enabling near real-time analysis of CDRs and network events.
- Engineered DDL/DML SQL scripts to support OLTP to OLAP synchronization and schema evolution.
- Led implementation of data quality and validation checks, ensuring reliable delivery of telecom KPIs and analytical models.
- Created custom Airflow DAGs with parameterized configurations to manage data refresh frequency, increasing pipeline flexibility and maintainability across multiple environments.
- Collaborated with telecom SMEs to support use cases like churn prediction, usage trends, and performance reporting.

Data-Pro IT, Hyderabad-India. **May 2021 – February 2022**
Data Engineer | Product: Enterprise BI & Data Analytics Automation for Reporting & Visualization
Tools: SQL, Python, Tableau, Spotfire, Excel, Git, GitHub

- Improved dashboard load performance by 30% through query and design optimization in Tableau and Spotfire.
- Automated reporting pipelines using Python and SQL, increasing stakeholder data accessibility by 25%.
- Validated data accuracy through rigorous QA processes, increasing report reliability by 20%.
- Built reusable SQL-based data marts to support department-specific KPIs and automated report scheduling, improving dashboard refresh reliability by 40%.
- Enhanced collaboration efficiency by 35% using Git and GitHub, streamlining version control workflows.

PROJECT EXPERIENCE

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.