

# NITHYASHREE BALACHANDRAN

## Data Engineer & Analyst

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### ABOUT ME

Software and data engineering professional with 2 years of hands-on experience designing scalable data pipelines (on-prem and Cloud), optimizing distributed computing workloads using Spark, and implementing ML-based automations. Proficient in Python, SQL, R and modern cloud platforms (GCP, AWS). Demonstrated ability to deliver secure, high-quality code in production systems while integrating cutting-edge AI technologies. Adept in full software development life cycle with strong problem-solving capabilities and a passion for GenAI.

### EDUCATION

SSN COLLEGE OF ENGINEERING

Bachelor of Engineering  
in Biomedical Engineering

2019-2023

GPA - 8.9

### SKILL / TOOLS

Programming Languages:  
Python, R, SQL, pyspark, HTML, CSS

DevOps & SDLC: Git, CI/CD, Agile,  
Airflow, Power Automate

Big Data Technologies: Apache  
Spark, Hadoop, Databricks

ML & AI Ecosystem: scikit-learn,  
NumPy, Pandas, CNNs, GenAI, LLM  
integration (SQL-text conversion)

Cloud & Big Data Tools:  
GCP BigQuery, Looker

Monitoring & Observability:  
Grafana, Power Automate, Splunk

Databases: SSMS, MongoDB

### WORK EXPERIENCE

#### DATA ENGINEER & ANALYST

COMCAST - July 2023 - present

- Led the development of a company-wide ticket intelligence dashboard by integrating ServiceNow data across all SKY teams—uncovered ticket trends, root causes, and SLA patterns, enabling automation of high-frequency requests and significantly reducing manual intervention.
- Integrated GitHub Copilot into SKY internal systems to accelerate development workflows and explore automated SQL-to-text translation using LLMs—pioneered GenAI use cases for internal tooling and knowledge retrieval.
- Built and optimized ETL pipelines on Databricks using PySpark, processing data from sources like ServiceNow and Nexthink—improved data pipeline efficiency and enabled real-time analytics for executive dashboards.
- Developed critical service monitoring system via Python and Grafana—cut downtime and improved early issue detection by 45%.
- Automated meeting room analytics using Cisco APIs, Power BI, and ML forecasting—improved space utilization by 30% across SKY office locations.
- Processed purchase reason KPIs using NLP techniques and implemented ticket category prediction through topic modeling—enhanced support analytics and automated issue classification.

### CERTIFICATIONS

- Google Cloud Certified Professional Data Engineer
- Google Data Analytics Professional
- Supervised Machine Learning - DeepLearning.AI
- SQL & Relational Databases - IBM
- Data Analysis with R programming - Google

### PROJECTS & AWARDS

- Predicted optimal weight to lift** for trainees from bicep sEMG signals using ML models (AdaBoost, Random Forest) with 80% accuracy.
- Developed a **cuffless BP monitoring technique** using facial videos and remote PPG. Extracted IBI features and applied regression models to estimate BP; tested on 15 participants under varied conditions.
- Pneumonia Detection from X-ray Images:** Built a CNN model (ResNet-18) to detect pneumonia using 26,684 X-ray images.
- SMART INDIA HACKATHON 2022** - Winners: Developed a smartphone application using React Native to predict vital parameters from face..