

# SJ Arulprasaad

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## Summary

AI/ML Engineer and Data Analyst with strong foundations in machine learning, deep learning, and data-driven problem solving. Skilled in designing predictive models, anomaly detection systems, and data pipelines. Experienced with generative models, statistical analysis, and scalable deployment. CGPA 9.43 with top academic ranking at VIT Chennai.

## Core Skills

**Languages:** Python, SQL, R, JavaScript, C++, Java

**ML/DL:** PyTorch, TensorFlow, scikit-learn, Hugging Face, XGBoost

**Data/Analytics:** Pandas, NumPy, Matplotlib, Seaborn, Tableau, Power BI

**Deployment:** FastAPI, Docker, GitHub Actions, MLflow

**Databases:** PostgreSQL, MySQL

## Professional Experience

### Quantum-Inspired Anomaly Detection Internship

scikit-learn, NumPy

*Summer Research Internship under VITC University*

- Designed quantum-inspired feature embeddings to improve anomaly detection on large-scale streaming datasets.
- Implemented fused similarity scoring (cosine, spherical, Mahalanobis) for noisy data robustness.
- Applied sliding window processing for real-time monitoring (30M+ rows).

## Projects

### Advanced Neuro-Lopp WGAN for Conditional Image Generation

PyTorch, TensorBoard

*Deep Learning*

- Generated high-fidelity images in small-sample, domain-specific datasets.

### Workflow Automation for Data Pipelines

Python, Airflow, Docker

*Data Engineering*

- Automated ETL workflows for real-time data ingestion, cleaning, and validation.

### Data Analysis Dashboard

Tableau, Pandas, SQL

*Analytics*

- Created interactive dashboards analyzing sales and customer trends.
- Automated reporting pipeline reducing manual analysis time by 60%.

## Education

### B.Tech in Computer Science and Engineering (AI/ML) — VIT Chennai

Aug 2023 – May 2027

*CGPA: 9.43 / 10*

### Maharishi Vidya Mandir Senior Secondary School (Class 12)

May 2023

*Score: 94.5%*

## Achievements

- Secured **Rank 1** in AI & ML specialization (CSE) for Semester 1 at VIT Chennai
- Ranked among top 15 teams in Data Mission Impossible Workshop hosted on Kaggle