

# SJ Arulprasaad

Chennai, Tamil Nadu, India

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## Summary

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Proficient in Data Structures and Algorithms using Java, with a strong foundation in designing efficient and optimized solutions. Skilled in machine learning, deep learning, and predictive modeling. Experienced in data analysis, feature engineering, and workflow automation, with a strong background in building models for anomaly detection and forecasting. Skilled in applying statistical methods and advanced analytics to drive insights and optimize decision-making.

## Education

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### Bachelor of Technology in Computer Science and Engineering — AI/ML Specialization

VIT Chennai, Tamil Nadu, India

Aug 2023 – May 2027

CGPA: 9.43 / 10

Maharishi Vidya Mandir, Chennai, Tamil Nadu, India

May 2023

Score: 94.5%

## Work Experience

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### Quantum-Inspired Anomaly Detection Internship

Python, scikit-learn, NumPy

Summer Research Internship — VITC University

- Developed end-to-end anomaly detection pipelines for large-scale streaming datasets (30M+ rows), leveraging quantum-inspired feature embeddings and fused similarity scoring to improve robustness on noisy industrial data.
- Automated real-time anomaly monitoring using sliding-window processing, enabling early alerts and reducing manual intervention in data validation workflows.

## Key Projects

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### Automated Data Pipeline Workflows

Python, Airflow, Docker, FastAPI

Software Automation & Data Engineering

- Built automated ETL pipelines with integrated monitoring and error handling, reducing manual effort by 70%.

### Predictive Maintenance Simulation

Python, scikit-learn, FastAPI

Industrial Automation

- Designed predictive models for equipment failure forecasting and deployed via FastAPI for seamless integration into production dashboards.

### Interactive Data Dashboard

Tableau, Pandas, SQL

Analytics & Reporting Automation

- Automated KPI dashboards with scheduled data refresh, reducing reporting time by 60%.

## Technical Expertise

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

**Automation & Workflow:** Airflow, Docker, FastAPI, MLflow, ETL pipelines, real-time monitoring, anomaly detection

**Machine Learning / DL:** PyTorch, TensorFlow, scikit-learn, XGBoost

**Data / Analytics:** Pandas, NumPy, Tableau, Power BI, PostgreSQL, MySQL

## Honors & Awards

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- 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