

PERARIVALAN K

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PROFESSIONAL SUMMARY

Data Analyst and AI Practitioner with hands-on experience in Python, SQL, data analysis, and business analytics. Built multiple end-to-end analytics systems including AI-powered SQL analytics, customer uplift modeling, anomaly detection, and data quality platforms. Skilled in data cleaning, exploratory analysis, statistical modeling, and dashboard reporting. Portfolio projects available demonstrating real analytics workflows and data-driven insights.

TECHNICAL SKILLS

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|-------------------------|--|
| Languages | Python, SQL (MySQL) |
| Data Analysis | Pandas, NumPy, Data Cleaning, Exploratory Data Analysis (EDA) |
| Visualization | Power BI, Excel, Matplotlib |
| Statistics | Hypothesis Testing, A/B Testing, Trend Analysis |
| Machine Learning | Classification Models, K-Means Clustering, Uplift Modeling, Autoencoders |
| Concepts | ETL Pipelines, Data Modeling, CRISP-DM, Data Quality Validation |
| AI Systems | LLM Integration, Model Context Protocol (MCP) |

KEY PROJECTS

End-to-End Business Analytics Pipeline *da-end2end.lovable.app*

- Built a complete analytics workflow using Python, MySQL, and Power BI to analyze 96k+ transactional records.
- Performed data cleaning, SQL analysis, KPI extraction, and EDA to identify revenue trends and customer behavior patterns.
- Developed interactive Power BI dashboards to visualize sales performance and support data-driven business decisions.

Tools: Python, Pandas, MySQL, Power BI, Data Cleaning, EDA

AI Natural Language SQL Analytics *mcp-mysql-site.vercel.app*

- Developed an AI-powered analytics interface that converts natural language questions into SQL queries for MySQL databases.
- Integrated Claude AI using Model Context Protocol (MCP) to automate translation of business questions into structured SQL queries.
- Enabled users to retrieve database insights and analytical reports using plain English queries.

Tools: Python, SQL, MySQL, LLM Integration, MCP

DataGuard – Data Quality Validation Platform *data-guard-app.vercel.app*

- Built a data quality validation platform to detect missing values, inconsistencies, and invalid records in structured datasets.
- Implemented rule-based validation workflows using Python and Pandas to ensure data integrity before analysis.
- Designed the system to support reliable data cleaning and preprocessing in analytics pipelines.

Tools: Python, Pandas, Data Cleaning, Data Validation

Customer Uplift Modeling Application *upliftmodeling.lovable.app*

- Implemented uplift modeling techniques to estimate individualized treatment effects from A/B testing datasets.
- Applied customer segmentation and statistical analysis to identify users most likely to respond to targeted interventions.
- Demonstrated how machine learning can support data-driven marketing and experimentation strategies.

Tools: Python, Scikit-learn, K-Means, Statistical Analysis, A/B Testing

PROFESSIONAL EXPERIENCE

Data Analytics and AI Project Development

2025 – Present

Self-Directed

- Designed and implemented multiple end-to-end analytics and machine learning projects independently.
- Applied Python, SQL, and statistical modeling to real-world structured datasets.
- Built analytical web applications integrating APIs, LLMs, and data workflows.

Independent Technology Research – Web3 Systems

2020 – 2024

- Deployed and monitored validator nodes in blockchain test environments.
- Investigated system behavior and performance through structured log-based analysis.

Network Operations Engineer

2018

UST Global, Chennai

- Monitored enterprise network systems and investigated operational incidents.
- Analyzed system logs to detect anomalies and support issue resolution.

EDUCATION

Bachelor of Engineering – Electronics and Communication

2015

Apollo Engineering College, Chennai

CERTIFICATIONS

- Google AI Professional Certificate
- IBM – Data Analysis with Python
- SQL for Data Science – UC Davis
- Python for Data Science – IBM
- Data Science Math Skills – Duke University
- AI Programmer Program – Cultus Education

LANGUAGES

English | Tamil