

BALAJI S

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Profile Summary

Recent B.E. Electronics and Communication Engineering graduate with hands-on experience in data analytics, machine learning, and full-stack web development. Skilled in Python, SQL, Power BI, Tableau, and ETL workflows, with additional expertise in HTML, CSS, JavaScript, and PHP for building AI-integrated dashboards and web apps. Adept at creating automated pipelines, predictive models, and interactive reporting systems that transform business requirements into insights. Known for problem-solving, analytical thinking, and collaboration, with a passion for using data and technology to drive innovation. Open to relocation.

Technical Skills

- **Data Analytics & Visualization:** Power BI (DAX, Data Modeling), Tableau, Excel (Power Query, Lookups, Pivots), Tableau
- **Data Management:** SQL, MySQL, ETL Pipelines, Data Cleaning, Transformations
- **Programming & ML:** Python (Pandas, NumPy, Matplotlib, Scikit-learn, TensorFlow), Java, API Integration
- **Consulting & Delivery:** Stakeholder Communication, Business Requirement Gathering, Insight Presentation
- **Web Development:** HTML, CSS, JavaScript, PHP, AI-Integrated Web Apps
- **Tools & Practices:** MS Office, Git, Jupyter Notebook, Linux, SDLC, Workflow Automation, Bash Scripting

Internship

Data Science Intern – VCodez

Jul 2025 – Sep 2025

- Built automated reporting pipelines using Python and SQL, cutting manual reporting time by 40%.
- Designed data validation scripts that improved accuracy and reduced recurring errors.
- Partnered with business teams to align reports with KPIs and operational goals, driving better decision-making.
- Authored internal documentation and SOPs, reducing troubleshooting time by 25% for analytics teams.

Projects

Bank Loan Report Dashboard

Sep 2025

- Designed and developed an end-to-end Power BI dashboard to monitor bank loan performance metrics such as default rates, approval ratios, and borrower demographics.
- Built ETL pipelines using SQL for data extraction, transformation, and loading from multiple data sources.
- Created DAX measures and interactive visualizations for risk segmentation and loan portfolio insights.
- Delivered actionable insights that helped identify high-risk loan categories, improving lending strategies and risk management.
- Tools: Power BI, MS SQL Server, DAX, Excel

Sales & Profit Dashboard

Aug 2025

- Developed an interactive, executive-level dashboard to analyze sales, profit, and customer performance across categories and regions.
- Performed data cleaning and preparation using Power Query, followed by PivotTables and PivotCharts for key business metrics.
- Designed visual insights including Profit by Year, Sales by Category, Customer Count by Year, Sales Heatmap by State, and Top 5 Customers by Profit.
- Enabled data-driven decision-making through a fully automated and visually intuitive reporting system.
- Tools: Microsoft Excel (Power Query, Power Pivot, PivotTables, Charts, Conditional Formatting)

Fault Tolerant Matrix Computation on Systolic Arrays

Feb 2025 – May 2025

- Designed and implemented fault-tolerant systolic array architecture for matrix computation.
- Applied error detection and correction techniques to enhance system reliability.
- Simulated using Verilog HDL and validated fault coverage with Vivado.
- Published and presented research at ICCCNT 2025 (IEEE, IIT Indore).
- Tools: Verilog HDL, Vivado.

Video-Based Emotion Detection Using Deep Learning

Sep 2022 – May 2023

- Built a CNN-based deep learning model for real-time facial emotion recognition.
- Utilized FER2013 dataset and integrated OpenCV for live video stream analysis.
- Achieved multi-class classification for emotions like happy, sad, angry, neutral, etc.
- Tools: Python, TensorFlow, Keras, OpenCV.

Education

B.E. Electronics and Communication Engineering

- Sri Ramakrishna Engineering College, Coimbatore
- CGPA: 6.62 / 10.0

Certifications

- Data Analytics Essentials – Cisco Networking Academy
- Foundations of Data Science – Google / Coursera
- Python for Data Science, AI & Development – IBM
- Databricks Data Analytics Certificate
- Advanced Data Structures & Algorithms
- Backend Web Development using MySQL & PHP
- AWS Cloud Practitioner Essentials – Amazon Web Services

Virtual Job Simulations

- Deloitte Data Analytics – Forensic analysis & Tableau dashboards (Jun 2025)
- Quantitative Research – Commodity pricing & FICO score modeling (Jun 2025)
- GenAI Simulation – Built AI-powered financial chatbot with NLP (Jun 2025)
- Software Engineering – Schema-based backend logic & scalable data models (Jul 2025)

Achievements & Presentations

- Presented research paper “Fault Tolerance Techniques for Error Detection and Correction in Systolic Arrays” at the Sixteenth International Conference on Computing, Communication and Networking Technologies (ICCCNT 2025 - IEEE, IIT Indore).

Strengths

- Analytical Problem-Solving
- Data Storytelling
- Cross-Functional Collaboration
- Stakeholder Communication
- Quick Learning
- Adaptability
- Attention to Detail
- Process Improvement

Interests

- Business Intelligence
- KPI Dashboards
- Machine Learning
- Predictive Analytics
- Workflow Automation
- Cloud Platforms
- Data Engineering
- Continuous Learning