

SUNDARAVELA A

Aspiring Data Engineer — Big Data Enthusiast

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Portfolio: [My Portfolio Website](#)

SUMMARY

- Recent Information Technology graduate skilled in SQL, Python, and Linux.
- Passionate about data engineering and big data technologies, with a strong interest in building scalable and efficient data solutions.
- Currently expanding my expertise by learning Hadoop, Spark, and cloud data services.

SKILLS

- **Database Management:** MySQL (RDBMS)
- **Programming Languages:** Python
- **Web Technologies:** HTML, CSS, JavaScript
- **Operating Systems:** Linux (Ubuntu)
- **Tools & Technologies:** Visual Studio Code, PyCharm, Jupyter Notebook, SQL Notebooks, Google Firebase Cloud Messaging, GitHub

PROJECTS

Spotify Data Analytics

[GitHub Link](#)

Developed a data analytics pipeline using Spotify's Web API to extract music metadata, transform data with Python, and load into MySQL (RDBMS) for analysis. Visualized insights with Matplotlib and conducted ETL using Pandas in Jupyter Notebook, developed primarily in PyCharm.

Tools & Technologies: Jupyter Notebook, Matplotlib, MySQL (RDBMS), Pandas, Python, PyCharm, Spotify Web API

Zomato-like Food Ordering Website Data Analytics

[GitHub Link](#)

Built a full-stack food ordering system with MySQL (RDBMS) backend and Python Flask API. Performed SQL analytics to identify revenue and customer trends. Frontend implemented using HTML, CSS, JavaScript. Managed development in PyCharm.

Tools & Technologies: Flask, HTML, CSS, JavaScript, MySQL (RDBMS), Python, PyCharm, SQL Notebooks

Instagram-like Push Notification and Data Analytics

[GitHub Link](#)

Implemented real-time push notifications using Google Firebase Cloud Messaging with a Flask backend and MySQL (RDBMS) storage. Developed analytics on notification patterns and user engagement using SQL queries. Frontend integrated with Firebase SDK.

Tools & Technologies: Flask, Google Firebase Cloud Messaging, HTML, CSS, JavaScript, MySQL (RDBMS), Python, PyCharm

Local Mistral GPT with Flask Backend

GitHub Link

Developed a local AI chatbot application using the Mistral 7B model running on Ollama. Built a Flask backend with Flask-CORS for secure cross-origin communication between frontend and backend. The model runs entirely on the local machine, eliminating cloud API dependencies and ensuring data privacy. Created a responsive frontend for real-time AI interactions.

Tools & Technologies: Python, Flask, Flask-CORS, Ollama, Mistral 7B, JavaScript, HTML, CSS, PyCharm

Deep Learning-based Dementia Classification and Monitoring Using an Android App

Final year project leveraging ResNet-101 for spatial feature extraction and BiLSTM for temporal sequence analysis to classify dementia stages. Integrated into a React Native Android app for predictive analytics, real-time monitoring, and personalized care.

Tools & Technologies: BiLSTM, Jupyter Notebook, Python, PyCharm, React Native (Expo), ResNet-101, VS Code

EDUCATION

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| 2021 – 2025 | B.Tech in Information Technology, Sri Manakula Vinayagar Engineering College, Puducherry | CGPA: 8.0 |
| 2020 – 2021 | Higher Secondary Certificate (HSC), Vivekanandha Higher Secondary School, Puducherry | 86% |
| 2018 – 2019 | Secondary School Leaving Certificate (SSLC), Vivekanandha Higher Secondary School, Puducherry | 84% |

PUBLICATIONS

Deep Learning-Based Dementia Classification and Monitoring Using an Android Application
Maheshwaran.T, Nithyshkumar.G, Sundaravela.A, Kiran.S
DOI: <https://doi.org/10.52783/jisem.v10i27s.4419>

A deep learning approach integrating advanced neural networks with a mobile app for automated dementia diagnosis and monitoring, enabling early intervention and improved patient care.

ADDITIONAL INFORMATION

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| Languages: | English, Tamil |
| Hobbies: | Cricket, learning new skills and technologies |
| Certifications: | Java Full Stack Certification – Wipro TalentNext |
| Memberships: | Google Developer Student Clubs (GDSC) Member – Participated in college workshops |