Arul R

Data Analyst

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EDUCATION

Bachelor of Technology in Information Technology 09/2021 – 05/2025
Anna University, Chennai Krishnagiri
Studied at PSV College of Engineering and Technology (Affiliated College)
Grade: 81%

SKILLS

Python & Tools
Pandas, NumPy, Matplotlib, & Seaborn

DataBase
MySQL

Visualization
Power BI

Web Scraping
Data Collection, BeautifulSoup

Excel

LANGUAGES

English ●●●○○ Tamil ●●●●●

ACHIEVEMENTS

Awarded Best Interactive Award
MTIET-Mother Theresa Institute of Engineering Technology
Project Title:
Implementation Of AI-Enabled Real-Time Speech-To-Sign Language Converter With Animated Avatar

PROJECTS

Real-Time Weather Data Management 08/2025

Tools: Python, Supabase (PostgreSQL), MySQL, GitHub Actions, OpenWeatherMap API, CSV

- **Scope & Scale:** Developed a **fully automated, cloud-based data pipeline** to collect and store **real-time weather data** for **20 major global cities**, running continuously every **15 minutes** without local machine dependency.
- **Database Design:** Implemented a **normalized PostgreSQL schema** in Supabase with four linked tables — Cities, Weather Conditions, Weather Records, and Wind Data — enabling efficient storage and relational queries.
- **Automation:** Configured **GitHub Actions** to orchestrate scheduled data fetching, cleaning, and insertion into the cloud database, ensuring 24/7 uptime.
- **Data Management:** Enabled seamless **CSV export** from Supabase and **import into MySQL** for advanced SQL queries, joins, and aggregations.
- **Use Cases:** Supported **real-time dashboards**, **city-wise analytics**, and **trend analysis** (temperature, humidity, wind patterns) with compatibility for tools like **Power BI**.
- **Outcomes:** Delivered a scalable, serverless solution for continuous weather monitoring, reducing manual intervention to zero and enabling advanced analytics for research, reporting, and forecasting.
- **Learning:** Strengthened expertise in **ETL pipeline design, API integration, cloud databases, SQL optimization, and workflow automation** using GitHub Actions.

Exploratory Data Analysis of Internships in India 06/2025 – 07/2025

Tools: Python (Pandas, NumPy, Matplotlib, Seaborn), Jupyter Notebook, BeautifulSoup, Requests, Regex

- **Scope & Scale:** Scraped and analyzed **6,000+ internship listings** from Internshala, covering multiple industries, locations, and stipend brackets.
- **Data Processing:** Cleaned and preprocessed data by handling missing values, standardizing formats, removing **26 duplicates**, and treating stipend outliers using the IQR method.
- **Analysis & Visualization:** Designed **univariate, bivariate, and multivariate** visualizations to examine trends in role types, locations, duration, stipend ranges, and job offer rates.
- **Key Insights:**Work-from-home roles dominated listings.
  - Most internships lasted **2–6 months**, with ₹5k–₹10k/month stipends.
  - Higher stipends did not guarantee higher job offer rates (offers mostly fell in the 2–3 LPA range).
  - Early application did not significantly improve selection chances.
- **Outcomes:** Delivered actionable recommendations for **students** to optimize internship searches and for **employers** to refine hiring strategies.
- **Impact:** Enabled data-driven awareness of internship market trends, improving decision-making for both applicants and recruiters.
- **Learning:** Strengthened skills in **data wrangling, exploratory data analysis, web scraping, and data visualization**, while improving ability to communicate complex insights clearly to non-technical audiences.

Implementation Of AI-Enabled Real-Time Speech-to-Sign Language Converter With Animated Avatar 03/2025 – 05/2025
Final Year Project

Tech Stack: Python, Flask, spaCy, Stanza, Stanford Parser, SIGML, Tailwind CSS
Adapted and enhanced an open-source Flask application that converts text and speech to Indian Sign Language (ISL) using SIGML-based avatar animations.
Integrated real-time voice input via Google Speech Recognition, and configured local Stanford Parser setup for gloss generation.
Improved UI with Tailwind CSS and contributed to testing and deployment.

CERTIFICATES

- Python Programming