

# SAMUEL LEWIS

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## Education

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### St Joseph Engineering College

*Bachelor of Computer Science and Engineering*

**Dec 2021 - May 2025**

*Mangaluru, Karnataka*

- **First class - CGPA: 7.02/10**
- **Courses:** Data structures and application, Design and analysis of algorithm, Digital principles and design, Computer organization and architecture, Operating systems, Database management system, Software engineering and project management, Computer networks, Automata theory and computation, System software and compiler design

## Work Experience

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### Manipal Technologies Limited | *certificate*

**Feb 2025 – Jun 2025**

*Fullstack Development Intern*

*Manipal, Karnataka*

- **Engineered and deployed a scalable web application** to automate ingestion of 4–5 Excel files/month (75K–80K rows each) into SQL, **consolidating 16M+ rows since 2021** and **data access for 10+ R&D employees**.
- **Eliminated 20+ hours of manual data analysis per week** by building a **dynamic filter interface** that auto-queries SQL tables based on **custom inputs (date range, chapter, HS code, column filter)**.
- **Developed and integrated a backend Extract Transform Load (ETL) pipeline** to automate column pruning, optimizing database efficiency and **boosting storage capacity by 65%**.
- **Implemented asynchronous background processing** in the API to enhance resilience and fault tolerance, enabling parallel task execution and **cutting memory usage by 25%**.

### Zephyr Technologies & Solutions Pvt Ltd | *certificate*

**Oct 2023 – Nov 2023**

*Machine Learning Intern*

*Mangaluru, Karnataka*

- **Completed coursework in Python programming and foundational machine learning concepts**, including supervised and unsupervised learning techniques.
- **Gained hands-on experience with key Python libraries** for data analysis and machine learning, such as NumPy, Pandas, Matplotlib, Seaborn, and Scikit-learn.
- **Implemented basic machine learning workflows**, including data preprocessing, model training, evaluation, and visualization using real-world datasets.

## Projects

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### Trade Data Analysis | *Source Code*

**Flask API | HTML/CSS/JavaScript | MySQL Workbench**

- Engineered a **Flask-based Excel data processing platform** with **automated schema validation** and **MD5-based duplicate detection**, improving **data accuracy and integrity for large-scale imports**.
- **Integrated MySQL with SQLAlchemy** and implemented **filter-based export features**, enabling **efficient querying and structured data output** with support for **concurrent processing via connection pooling**.

### Credit Card Fraud Detection using Machine Learning | *Source Code*

**NumPy | Pandas | Matplotlib | Seaborn**

- Conducted **exploratory data analysis on 284,807 credit card transactions**, identifying a **0.17% fraud rate** through statistical analysis, correlation mapping, and visualization.
- Developed and tuned a **Random Forest model** achieving **99%+ accuracy, 0.92 precision, and 0.94 recall** for **fraud detection** on the test dataset.

## Certifications

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**Salesforce Administrator Virtual Internship, SmartInternz:** SmartIntenz, Salesforce

**CompTIA Security+ Certification (SY0-501):** Infosys, Springboard

**Ports, Protocols, & the OSI Model:** Infosys, Springboard

## Technical Skills

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**Languages:** C, Python, HTML/CSS, JavaScript

**Developer Tools:** VS Code, GitHub

**Libraries/Frameworks:** Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, FlaskAPI

**Database:** MySQL Workbench