

Part 1: The Backend (The "Detective Agency")

This is all the technology used for data processing and machine learning.

- **Python:** The main programming language used for all the data science and ML work.
- **Pandas:** A powerful Python library used for reading, cleaning, and organizing the transaction data from the CSV files.
- **Scikit-learn:** A fundamental machine learning library for Python. We use it to split our data into training and testing sets.
- **LightGBM:** A high-performance, industry-standard machine learning library used to train our "detective" model that predicts the risk score.
- **Joblib:** A simple Python library we use to save our trained ML model's "brain" to a file (aml_model.pkl) so we can reuse it later.

Part 2: The Frontend (The "Investigation Room")

This is all the technology used to create the website and the interactive visualizations you see in the browser.

- **HTML:** The core language used to create the structure and layout of the webpage (all the panels, buttons, and text).
- **CSS:** The language used for all the styling—colors, fonts, spacing, and making the design look professional and clean.
- **Tailwind CSS:** A popular CSS framework that helps build modern designs quickly. We use it for the main layout and button styles.
- **JavaScript:** The programming language that makes the website interactive. It handles everything you do, from clicking buttons to displaying information.
- **Vis.js:** A powerful JavaScript library that does all the heavy lifting for our visualizations.
 - **Vis Network:** Specifically used to draw the interactive network graph of nodes and edges.
 - **Vis Timeline:** Specifically used to draw the synchronized timeline at the bottom of the screen.
- **PapaParse:** A simple but effective JavaScript library used to read the data from the CSV files that you upload in the browser.