

Derived user requirements from expert interviews

Coding Group	Identified User Stories	Derived Deign/User Requirements
Advanced Techniques and Approaches (CG1)	As a compliance officer/developer, I want the FDS to consider contextual data (e.g., time, place, log in behaviours, device ID, IP address) so that it can detect anomalies within a broader context. (US1)	Ensure comprehensive contextual analysis by integrating and analysing various contextual data points to improve fraud detection accuracy. (UR1)
	As manager, I want the FDS to evolve from purely detecting fraud to also preventing it so that potential fraud can be stopped before it occurs. (US2)	Enable proactive fraud prevention by incorporating predictive capabilities, allowing the FDS to evolve from solely detecting fraud to also preventing potential fraud before it occurs. (UR2)
AI and Rule-Based Approaches (CG2)	As a compliance officer, I want the FDS to combine AI and rule-based approaches so that it can balance flexibility and precision. (US3)	Ensure a balanced approach to fraud detection by integrating AI and rule-based methods, providing both flexibility and precision in identifying fraudulent activities. (UR3)
Balancing Multiple Objectives (CG3)	As a compliance officer, I want the FDS to automatically close alerts that are identified as false positives to reduce manual review workload. (US4)	Enhance fraud detection efficiency by accurately identifying fraud transactions in real-time, reducing false positives, and maintaining or improving key performance metrics. (DR4)
	As a compliance officer, I want the FDS to maintain a balance between accuracy and efficiency so that it minimises false positives to the greatest extent possible. (US5)	
Bias and Ethics (CG4)	As a developer, I want the FDS to mitigate bias so that it does not unfairly target specific groups of card users and minimises human bias in decision-making processes. (US6)	Ensure the FDS incorporates bias mitigation techniques to avoid unfairly targeting specific groups of card users and to minimise human bias in decision-making processes. (UR4)
Customer Involvement and Business Strategy Adaptation (CG5)	As a manager, I want to be involved in the development process so that the FDS meets our needs and expectations. (US7)	Ensure the FDS development process includes active involvement from the end-user to tailor the system to the business model, goals, services, and customer base, ensuring alignment with overall objectives and meeting specific needs and expectations. (UR5)
	As a manager, I want the FDS to adapt to our business model, goals, services, and customer base so that it aligns with our overall objectives. (US8)	
	Ensure the FDS provides the best cost–benefit ratio by reducing manual work, working efficiently, aligning with available resources, incorporating scalability, and optimising risk management. (US9)	Enabling a balance between cost-effectiveness and enhanced operational efficiency. (DR2)
Data Quality and Integrity (CG6)	As a developer, I want a thorough data understanding and preparation process to be the focus so that the model training is based on the most accurate and relevant data. (US10)	Ensure high data quality and integrity through comprehensive preprocessing, effective feature engineering, and secure data handling. (DR3)
	As a developer, I want the FDS to ensure data integrity so that it maintains trustworthiness. (US11)	
Explainability and Transparency (CG7)	As a compliance officer, I want the FDS to provide clear, user-friendly explanations for its decisions so that I can understand and trust its outputs, and effectively use the system without needing deep technical knowledge. (US12)	Ensure transparency and explainability by providing interpretable insights, clear reasoning paths, and confidence levels, aligned with expert tasks, to build trust and understanding. (DR8)
	As a compliance officer/manager, I want the FDS to be transparent in its operations so that I can understand how it works, how it was trained, and ensure it is working correctly. (US13)	
Learning and Feedback	As a compliance officer, I want the FDS to integrate my feedback into its learning process to improve. (US14)	Enable the FDS to incorporate feedback into its learning process to continuously improve accuracy and performance. (UR6)

Integration (CG8)	As a compliance officer, I want the FDS to learn from the behaviour of card users to better detect anomalies and adapt to legitimate user patterns. (US15)	Ensure the capability to learn from and adapt to the evolving transactional behaviours of individual card users. (DR1)
	As a compliance officer/developer/manager, I want the FDS to be monitored and iterative improved so that it operates effectively and remains effective against evolving fraud tactics and unforeseen changes. (US16)	Enable constant updating, monitoring, and adaptation to address emerging risks, changes in data patterns, and evolving fraud patterns. (DR6)
User Interaction and Support (CG9)	As a compliance officer, I want interactive explainability features so that I can see the potential outcomes of changes to certain features and understand the FDS's decisions better. (US17)	Enable dynamic exploration of data and explanations through interactive features. (DR5)
	As a compliance officer, I want the FDS to be user-friendly and provide clear visual representations of data so that I can easily interpret its outputs. (US18)	
	As a compliance officer, I want the FDS to support my decision-making process so that I can handle fraud cases more effectively. (US19)	Ensure transparency and explainability by providing interpretable insights, clear reasoning paths, and confidence levels, aligned with expert tasks, to build trust and understanding. (DR8)