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### **Epic 1: AI team**

User Story 1: Setup Azure Environment

**As an** AI engineer, **I want to** have a secure and scalable environment in Azure, **So that** I can host and manage the data and training models efficiently.

**Acceptance Criteria:**

**Given** the project requirements, **When** the Azure environment is set up, **Then** it should include necessary services like Azure Blob Storage, Azure Databricks, and Azure SQL Database, with defined access controls and scalable resources.

User Story 2: Anonymize Data

**As an** AI engineer, **I want to** receive a database with anonymised sensitive data, **So that** the training data is compliant with privacy regulations and free of PII.

**Acceptance Criteria:**

**Given** the presence of PII in the dataset, **When** the dataset is cleaned, **Then** all sensitive information like names, addresses, and phone numbers should be removed or masked, with a log of actions maintained.

User Story 2: Data Validation and Cleaning

**As an** AI engineer, **I want to** receive a clean data set, **So that** I can ensure the quality and accuracy of the data used for training the AI model..

**Acceptance Criteria:**

**Given** the raw dataset, **When** data validation and cleaning scripts are executed, **Then** the resulting dataset should be free of missing, duplicate, or erroneous data, and stored in a validated location.

User Story 4: Data Size

**As an** AI engineer, **I want to** receive a dataset with a large amount of data, **So that** I can accurately train the AI model with enough data to reduce over- and under-fitting

**Acceptance Criteria:**

**Given** the need to accurately train the AI model, **When** the dataset is being created, **Then** the dataset provided is large enough to support robust model training ensuring that the AI model can learn and generalise effectively for fraud detection.

User Story 5: Data Type

**As an** AI Team Member, **I want to** receive a dataset that is significantly diverse

**So that** I can effectively train the AI model to detect fraudulent claims with high accuracy.

**Acceptance Criteria:**

**Given** the data sources are integrated into the system, **When** the data is processed and made available, **Then** the dataset provided is diverse enough to support robust model training, covering various scenarios and examples of claims, ensuring that the AI model can learn and generalise effectively for fraud detection.

#### User Story 6: Data Annotation and Labeling

**As an** AI Team Member **I want to** receive a dataset that is properly annotated and labeled. **So that** the AI model can be trained with clear examples of fraudulent and non-fraudulent claims, enhancing its ability to distinguish between them

**Acceptance Criteria**

**Given** the data is prepared for training **When** the dataset is delivered **Then** it should include accurate labels for different categories of claims (e.g., fraudulent, non-fraudulent) and be consistently annotated according to predefined guidelines.

#### User Story 7: Data Annotation and Labeling

#### **Data Format and Usability**

#### **As an** AI Team Member **I want to** receive the dataset in a format that is easily usable and compatible with AI tools and platforms **So that** I can efficiently integrate the data into the training pipeline without additional data transformation or conversion steps

**Acceptance Criteria**

**Given** the data is prepared for delivery **When** the dataset is provided **Then** it should be in a standardized format (e.g., CSV, JSON) that is compatible with the AI tools and platforms used, and include necessary metadata and documentation for easy integration.

#### User Story 8: Data Standardisation **Data Consistency and Integrity**

**As an** AI Team Member **I want to** receive a dataset that maintains consistency and integrity across different data sources **So that** the AI model can be trained on a cohesive and reliable dataset without discrepancies or conflicting information

**Acceptance Criteria**

**Given** the dataset is created from multiple sources **When** the data is reviewed **Then** it should be consistent in terms of format, structure, and content, with integrity checks performed to ensure data accuracy and reliability.

### User Story 9: Data Relevance

**As an** AI Team Member, **I want to** receive a dataset that is highly relevant to current fraud detection scenarios, **So that** the AI model can be trained with data that accurately reflects the latest fraud tactics and trends, enhancing its effectiveness in real-world applications

**Acceptance Criteria**

**Given** the dataset is prepared for training, **When** the data is reviewed for relevance

**Then** the dataset should include recent and relevant examples of fraud claims, accurately representing current patterns and tactics used in fraud detection, with data that reflects up-to-date practices and emerging trends.

User Story 10:

### **Epic 2: NRMA Agent**

### **User Story 1: Access to Cleaned Data**

**As an** NRMA agent, **I want to** access the cleaned dataset, **So that** I can review the work done by the data team.

**Acceptance Criteria:**

**Given** the dataset is cleaned, **When** I access it, **Then** I should be able to view the cleaned data with all errors, duplicates, and missing values addressed.

### **User Story 2: Data Anonymisation Verification**

**As an** NRMA agent, **I want to** verify that all PII has been anonymised in the dataset, **So that** I can ensure compliance with privacy regulations before submission.

**Acceptance Criteria: Given** the anonymisation process, **When** I review the dataset,  
**Then** there should be no personally identifiable information (PII) present in any of the data fields.

### **User Story 3: Review of Data Relevance**

**As an** NRMA agent, **I want to** assess the relevance of the dataset to the AI model’s objectives, **So that** I can confirm that the data aligns with the intended use case.

**Acceptance Criteria:**

**Given** the business objectives of the AI model, **When** I review the dataset, **Then** the dataset should contain data points that are directly relevant to the model’s objectives.

### **User Story 4: Data Integrity Check**

**As an** NRMA agent, **I want to** perform an integrity check on the dataset, **So that** I can ensure the data is accurate and reliable.

**Acceptance Criteria:**

**Given** the need for accurate data, **When** I check the dataset, **Then** there should be no errors, inconsistencies, or corrupt data.

### **User Story 5: Documentation Review**

**As an** NRMA agent, **I want to** review the dataset’s accompanying documentation, **So that** I can understand the data sources, preprocessing steps, and any assumptions made.

**Acceptance Criteria:**

**Given** the dataset and its documentation, **When** I review the documentation, **Then** it should clearly explain data sources, preprocessing steps, and any relevant metadata.

### **User Story 6: Verify Data Consistency**

**As an** NRMA agent, **I want to** ensure that the data is consistent across different entries, **So that** I can confirm the reliability of the dataset.

**Acceptance Criteria:**

**Given** the dataset, **When** I examine it, **Then** the data should be consistent in terms of format, structure, and content across all entries.

### **User Story 7: Review of Data Augmentation Techniques**

**As an** NRMA agent, **I want to** review any data augmentation techniques applied to the dataset,  
**So that** I can ensure that the dataset is properly enhanced without introducing bias.

**Acceptance Criteria:**

**Given** the augmented dataset, **When** I review it, **Then** I should be able to confirm that the augmentation techniques are appropriate and do not introduce significant bias.

### **User Story 8: Metadata Inspection**

**As an** NRMA agent, **I want to** inspect the metadata of the dataset, **So that** I can verify the origin, collection methods, and any preprocessing steps applied.

**Acceptance Criteria:**

**Given** the metadata provided, **When** I review it, **Then** it should include comprehensive details about data origin, collection methods, and preprocessing steps.

### **User Story 9: Check for Bias in Data**

**As an** NRMA agent, **I want to** check the dataset for any inherent bias, **So that** I can ensure that the AI model will produce fair and unbiased outcomes.

**Acceptance Criteria:**

**Given** the dataset, **When** I review it, **Then** there should be no significant bias that could lead to unfair outcomes in the AI model.

### **User Story 10: Evaluate Data Coverage**

**As an** NRMA agent, **I want to** evaluate the coverage of different scenarios in the dataset, **So that** I can ensure that the dataset is comprehensive and robust.

**Acceptance Criteria:**

**Given** the need for comprehensive data, **When** I review the dataset, **Then** it should cover a wide range of scenarios relevant to the model’s objectives.

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### **User Story 11: Final Approval of Dataset for AI Training**

**As an** NRMA agent, **I want to** give final approval of the dataset, **So that** it can be sent to the AI team for model training.

**Acceptance Criteria:**

**Given** that all reviews and checks are complete, **When** I finalise the dataset, **Then** I should be able to approve it for submission to the AI team, ensuring that it meets all required standards and criteria.

### **User Story 11: Final Approval of Dataset for AI Training**

**As an** NRMA agent, **I want to** give final approval of the dataset, **So that** it can be sent to the AI team for model training.

**Acceptance Criteria:**

**Given** that all reviews and checks are complete, **When** I finalise the dataset, **Then** I should be able to approve it for submission to the AI team, ensuring that it meets all required standards and criteria.

### **User Story 12: Options Analysis**

**As an** NRMA agent, **I want to** receive an options analysis report, **So that** I can decide on the best way to undertake the project by comparing costs, time and relevance.

**Acceptance Criteria:**

**Given** that the NRMA agent oversees the project, **When** the data team creates the Options Analysis Report, **Then** it should contain various options on how the project will be complete and the recommended solution for comparison so the agent can complete the project in a cost-saving and fast way.

### **User Story 13: High Levels Solutions Design (HLSD)**

**As an** NRMA agent, **As an** NRMA Fraud Analyst, **I want to** receive a High-Level Solution Design (HLSD) from the data team, **So that** I can understand how the data infrastructure and processes align with the overall solution architecture for the fraud detection system.

**Acceptance Criteria:**

**Given** the data team has developed the HLSD, **When** the HLSD is delivered to NRMA  
**Then** it should include, An Overview of the data architecture and flow, Integration Points detailing how data will interface with the AI models and the Data Handling Processes outlining extraction, transformation, and loading (ETL) methods.

User Story 5: Build Training Dataset

**As an** AI engineer, **I want to** build a training dataset from the clean and anonymized data, **So that** the AI models can be trained on high-quality data.

**Acceptance Criteria:**

**Given** the cleaned and anonymized data, **When** the training dataset is created,  
**Then** it should be properly partitioned for training, validation, and testing, and stored in an accessible location.

User Story 6: Implement Version Control for Data

**As an** AI engineer, **I want to** implement version control for datasets, **So that** I can track changes and revert to previous versions if necessary.

**Acceptance Criteria:**

* **Given** the evolving nature of the datasets,  
  **When** version control is applied,  
  **Then** each dataset version should be tagged and documented, with the ability to roll back to previous versions if needed.

User Story 7: Automated Data Pipeline Monitoring

**As an** AI engineer,  
**I want to** have automated monitoring for the data pipeline,  
**So that** I can be alerted to any issues or failures in data ingestion and processing.

**Acceptance Criteria:**

* **Given** the need for continuous data processing,  
  **When** the pipeline is running,  
  **Then** monitoring tools should track its health, with alerts configured for any failures or anomalies, and logs maintained for pipeline activities.

User Story 8: Front-End Interface for Claims Manager

**As a** claims manager,  
**I want to** interact with a user-friendly front-end interface,  
**So that** I can easily manage and review the AI training data and its progress.

**Acceptance Criteria:**

* **Given** the requirement for a user interface,  
  **When** the front-end is developed,  
  **Then** it should allow the claims manager to view data summaries and pipeline status, and be accessible across devices.

User Story 9: Role-Based Access Control (RBAC)

**As an** AI engineer,  
**I want to** implement role-based access control,  
**So that** only authorized users can access specific data and tools.

**Acceptance Criteria:**

* **Given** the need for data security,  
  **When** RBAC is implemented,  
  **Then** roles and permissions should be defined for different user types, and access logs should be maintained for auditing purposes.

User Story 10: Agile Project Management

**As an** AI engineer,  
**I want to** follow Agile delivery practices,  
**So that** the project progresses iteratively with regular feedback and adjustments.

**Acceptance Criteria:**

* **Given** the Agile methodology,  
  **When** the project is managed,  
  **Then** sprints should be planned with clear goals and deliverables, and regular reviews and retrospectives should be conducted.

User Story 11: Data Security Compliance

**As an** AI engineer,  
**I want to** ensure data security compliance,  
**So that** the data and processes adhere to regulatory and organizational standards.

**Acceptance Criteria:**

* **Given** the importance of data security,  
  **When** security protocols are applied,  
  **Then** all data processing and storage should comply with relevant regulations, with regular security audits conducted.

User Story 12: Model Training Automation

**As an** AI engineer,  
**I want to** automate the model training process,  
**So that** models can be trained and retrained with minimal manual intervention.

**Acceptance Criteria:**

* **Given** the need for efficient model training,  
  **When** the automation scripts are executed,  
  **Then** models should be trained whenever new data is available, with progress and results logged and monitored.

User Story 13: Model Performance Dashboard

**As an** AI engineer,  
**I want to** have a performance dashboard,  
**So that** I can monitor the accuracy and efficiency of the AI models.

**Acceptance Criteria:**

* **Given** the need to track model performance,  
  **When** the dashboard is implemented,  
  **Then** it should display key performance metrics like accuracy, loss, and F1 score, updating in real-time as models are trained.

User Story 14: Data Backup and Recovery

**As an** AI engineer,  
**I want to** implement data backup and recovery processes,  
**So that** I can ensure data availability in case of failures.

**Acceptance Criteria:**

* **Given** the risk of data loss,  
  **When** backup processes are executed,  
  **Then** backups should be created regularly and stored securely, with recovery procedures documented and tested.

User Story 15: Documentation and Knowledge Transfer

**As an** AI engineer,  
**I want to** have comprehensive documentation,  
**So that** I can easily onboard new team members and ensure continuity.

**Acceptance Criteria:**

* **Given** the need for knowledge transfer,  
  **When** documentation is created,  
  **Then** it should cover all key processes, with code well-commented and best practices followed, and knowledge transfer sessions conducted and recorded.

### **Epic 2: NRMA**

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### **User stories**

### **Epic 1: User Input Form**

#### **User Story 1:**

**As an** NRMA agent, **I want to** view insurance claim details through a user-friendly format **so that I** can quickly and accurately review claims.

**Acceptance Criteria:**

1. **Given** an NRMA agent is logged into the system **When** the agent accesses the insurance claim form **Then** the form should be displayed in a clear and organised manner with labelled fields for all required details.
2. **Given** an NRMA agent is logged into the system **When** an NRMA agent is reviewing the form **Then** the system should flag any inputs that may be invalid or missing and display an error message.

#### **User Story 2:**

**As an** NRMA agent, **I want to** select the details/inputs (e.g make and model of the car) from a drop-down menu **so that I** can save time and reduce input errors.

**Acceptance Criteria:**

1. **Given** an NRMA agent is reviewing the insurance claim form **When** the agent reaches a certain field **Then** a drop-down menu should be available with a list of car makes and models to choose from.
2. **Given** an NRMA agent selects a car make from the drop-down menu **When** the selection is made **Then** the corresponding models for the selected make should be displayed in a subsequent drop-down menu.

#### **User Story 3:**

**As an** NRMAagent**, I want to** enter customer details from insurance claims **so that I can** generate a risk profile and prioritise cases for fraud investigation.

**Acceptance Criteria:**

1. **Given** an NRMA agent is reviewing insurance claims, **when** the risk profile is generated, **then** the system should display a prioritised list of cases that require further investigation based on the risk level.

#### **User Story 4:**

**As an** NRMA agent, **I want to** view previous incidents involving the driver **so that I can** review previous claims and information for fraud detection investigations**.**.

**Acceptance Criteria:**

1. **Given** an NRMA agent is reviewing the insurance claim form **When** the agent marks a claim to be a possible fraud **Then** the system should allow the agent to input customer details to assess previous claims made by the customer

#### **User Story 5:**

**As an** NRMA agent, **I want to** review the estimated repair cost of the claim **so that I can** assess the plausibility of the claim.

**Acceptance Criteria:**

1. **Given** an NRMA agent is reviewing the insurance claim form **When** the agent reaches the "Estimated Repair Cost" section **Then** the system should analyse whether the costs are reasonable for the claim and produce an outcome statement.

### **Epic 2: Feedback Mechanism**

#### **User Story 6:**

**As an** NRMA agent, **I want to** receive findings pop-up indicating the likelihood of a claim being fraudulent **so that I can** take appropriate action**.**

**Acceptance Criteria:**

1. **Given** a claim is submitted **When** the system processes the claim **Then** the system should display a probability percentage/likelihood indicating the likelihood of fraud.

#### **User Story 7:**

**As an** NRMA agent, **I want to** be notified of claims with a high fraud probability **so that I can** further review them to ensure thorough investigation.

**Acceptance Criteria:**

1. **Given** a claim has a high fraud probability **When** the agent is informed of the claim results **Then** the system should prompt the agent to escalate the claim for further review.

#### **User Story 8:**

**As an** NRMA agent, **I want to be** informed of claims with a low fraud probability **So that I** can streamline the claims process and focus more time on claims with a high fraud probability. .

**Acceptance Criteria:**

1. **Given** a claim has a low fraud probability **When** the agent reviews the claim results **Then** the system should display a low fraud possibility to the agent so they can proceed with processing the claim.

#### **User Story 9:**

**As an** NRMA agent**, I want the** system to adjust fraud detection thresholds based on ongoing data analysis **so that we** can maintain accuracy on the system.

**Acceptance Criteria:**

1. **Given** new data is available **When** the system analyses the data **Then** the fraud detection thresholds should be automatically adjusted to maintain accuracy of detecting fraud claims.

#### **User Story 10:**

**As an** NRMA agent**, I want to** receive reports when the fraud detection model identifies a potential new fraud pattern **so that I** can stay on top of the latest fraud tactics**.**

**Acceptance Criteria:**

1. **Given** the fraud detection model identifies a new fraud pattern **When** the pattern is detected **Then** the system should send an report to the agent with details of the new pattern.

### **Epic 3: Continuous Learning and Improvement**

#### **User Story 11:**

**As an** NRMA agent**, I want to** monitor the accuracy of the AI model with comparisons of the AI model's analysis vs the final results **So that I** can ensure it meets NRMA's fraud detection goals.

**Acceptance Criteria:**

1. **Given** the AI model is in use **When** the agent accesses the performance dashboard **Then** the system should display key performance metrics of the AI model’s accuracy.

#### **User Story 12:**

**As an** NRMA agent**, I want to** generate reports on the AI model's performance **so that I** can inform stakeholders about its effectiveness.

**Acceptance Criteria:**

1. **Given** the agent needs to generate a report **When** the agent selects the "Generate Report" option **Then** the system should produce a detailed report on the AI model's performance.

#### **User Story 13:**

**As a** NRMA agent, **I want to** implement a feedback loop to gather customer input on claim processing and fraud detection**, so that I** can improve customer satisfaction and make user-driven enhancements.

**Acceptance Criteria:**

1. **Given** the agent wants to gather customer feedback **When** the claim process is completed **Then** the system should prompt the customer to provide feedback on their experience.

#### **User Story 14:**

**As an** NRMA agent, **I want to** receive insights on post-approved claims for potential fraud missed during initial assessment, **so that I** can reduce post-claim fraud and improve detection accuracy.

**Acceptance Criteria:**

1. **Given** a claim is being assessed **When** the claim is approved **Then** the system should notify any potential fraud areas missed during the initial assessment.

### **Epic 4: User Experience**

#### **User Story 15:**

**As an** NRMA agent, **I want to** be able to easily navigate the system, **so that I** can minimise training time and user errors.

**Acceptance Criteria:**

1. **Given** an NRMA agent is new to the system **When** the agent uses the system **Then** the form should be intuitive and require minimal training to navigate and complete.

#### **User Story 16:**

**As an** NRMA agent, **I want to** have access to a help section within the form, **so that I** can quickly resolve any issues or questions I have.

**Acceptance Criteria:**

1. **Given** an NRMA agent is using the input form **When** the agent needs assistance **Then** there should be a help section within the form providing guidance and FAQs.

#### **User Story 17:**

**As an** NRMA agent**, I want the** input form to automatically save my progress, **so that I** can prevent data loss in case of interruptions**.**

**Acceptance Criteria:**

1. **Given** an NRMA agent is logged into the system **When** an NRMA agent is filling out the form **Then** the system should automatically save the agent's progress to prevent data loss in case of an interruption (e.g., system crash, network issue) .

#### **User Story 18:**

**As an** NRMA agent**, I want** the form to provide real-time validation of inputs in the system, **so that I** can ensure that the data accurately correlates to its field before submission.

**Acceptance Criteria:**

1. **Given** an NRMA agent is filling out the form **When** the agent inputs data **Then** the system should validate the inputs in real-time and notify the agent of any errors or issues.

#### **User Story 19:**

**As an** NRMA agent, **I want to** have the ability to review and edit claim details before final submission, **so that I** can correct any errors before submitting.

**Acceptance Criteria:**

1. **Given** an NRMA agent has completed the form **When** the agent reviews the claim details **Then** the system should allow the agent to edit any information before final submission.

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### User Story 20:

### As an NRMA agent, I want to receive feedback on the validity of each insurance claim through an intuitive interface, so that we can detect suspicious claims and process claims faster.

### Acceptance Criteria:

### Given an insurance claim has been submitted, when the claim is processed, then the system should provide feedback on its validity through an intuitive interface.

### Given the feedback is displayed, when an NRMA agent views the claim, then the interface should clearly indicate whether the claim is valid or suspicious, and provide actionable insights for further investigation.

### User Story 21:

### As an NRMA agent, I want to apply fraud detection across multiple insurance categories managed by NRMA, so that we can have consistent fraud detection across different insurance types.

### Acceptance Criteria:

### Given that fraud detection is applied, when a claim is submitted in any insurance category (e.g., vehicle, home, health, life, business), then the system should evaluate the claim for fraud using consistent criteria across all categories.

### Given a fraud detection evaluation, when the results are generated, then the system should provide consistent feedback and risk levels irrespective of the insurance category.

### User Story 22:

### As an NRMA agent, I want an intuitive form to input claims and receive fraud detection feedback, so that we can simplify the claim submission process and increase productivity.

### Acceptance Criteria:

### Given an NRMA agent is using the claim input form, when the agent inputs claim details, then the form should be intuitive and user-friendly, with clear instructions and error handling.

### Given a claim is submitted, when fraud detection is performed, then the system should provide immediate feedback on the claim's fraud risk within the same interface.

### **User Story 23:**

### **As an NRMA agent, I want to receive automated alerts when a claim is flagged as suspicious, so that we can proactively detect fraud and conduct timely investigations.**

### **Acceptance Criteria:**

### Given a claim is processed and flagged as suspicious, when the flag is triggered, then the system should automatically send an alert to the NRMA agent responsible for the claim.

### Given an automated alert is received, when the NRMA agent views the alert, then the alert should include relevant details about the suspicious activity and recommended actions for investigation.

### **User Story 24:**

### **As an NRMA agent, I want to ensure seamless integration with NRMA's existing insurance claim processing systems, so that we can maintain a smooth workflow with minimal disruption.**

### **Acceptance Criteria:**

### Given the fraud detection system is integrated with existing insurance claim processing systems, when a claim is processed, then the system should seamlessly transfer and synchronize data between the fraud detection system and existing systems without errors.

### Given a claim is handled through the integrated systems, when the claim is updated or reviewed, then the changes should be reflected in real-time across all integrated systems to maintain workflow continuity.

### **Epic 5: Insurance Claims**

#### **User Story 25:**

**As an** NRMA agent**, I want to** detect fraudulent claims for vehicle accidents and damages, **so that we** can reduce fraudulent payouts and increase detection accuracy.

**Acceptance Criteria:**

1. **Given** a vehicle accident claim is submitted **When** the system processes the claim **Then** the system should flag potential fraudulent claims for further review.

#### **User Story 26:**

**As an** NRMA agent, **I want to** identify fraudulent home insurance claims related to theft,fire, and other damages, **so that we** can minimize false claims and improve the claim verification process.

**Acceptance Criteria:**

1. **Given** a home insurance claim is submitted **When** the system processes the claim **Then** the system should flag potential fraudulent claims for further review.

#### **User Story 27:**

**As an** NRMA agent**, I want to** spot fraudulent health insurance claims, such as inflated medical bills or unnecessary treatments, **so that we** can lower fraudulent claims and enhance claim validation.

**Acceptance Criteria:**

1. **Given** a health insurance claim is submitted **When** the system processes the claim **Then** the system should flag potential fraudulent claims for further review.

#### **User Story 28:**

**As an** NRMA agent**, I want to** detect fraudulent life insurance claims, including fake death certificates or staged incidents, **so that we** can prevent fraudulent payouts and ensure better claim accuracy.

**Acceptance Criteria:**

1. **Given** a life insurance claim is submitted **When** the system processes the claim **Then** the system should flag potential fraudulent claims for further review.

#### **User Story 29:**

**As an** NRMA agent**, I want to** identify fraudulent claims in business insurance, such as false loss of income or exaggerated property damage, **so that we** can reduce fraudulent claims and improve business insurance claim handling.

**Acceptance Criteria:**

1. **Given** a business insurance claim is submitted **When** the system processes the claim **Then** the system should flag potential fraudulent claims for further review.

### **Epic 6: Learning and Development**

#### **User Story 30:**

**As an** NRMA agent**, I want to** provide transparency and educate customers on how fraud detection works, **so that we** can increase trust and reduce fraudulent attempts.

**Acceptance Criteria:**

1. **Given** an NRMA agent interacts with a customer **When** the agent explains the fraud detection process **Then** the customer should understand how fraud detection works and its benefits.

### **Epic 7: Compliance and Standards**

#### **User Story 31:**

**As an** NRMA agent, **I want to** ensure the fraud detection system complies with insurance industry regulations, **so that we** can maintain regulatory compliance and reduce legal risks.

**Acceptance Criteria:**

1. **Given** the fraud detection system is in use **When** the system processes claims **Then** it should adhere to all relevant insurance industry regulations and standards.

### User Stories for NRMA Fraudulent Insurance Claims Detection System

#### **Epic 1: User Input Form:**

1. As an NRMA agent, I want to input car insurance claim details through a user-friendly form so that I can quickly and accurately submit claims.
2. As an NRMA agent, I want to select the make and model of the car from a drop-down menu so that I can save time and reduce input errors.
3. As an NRMA agent, I want to enter the age and gender of the driver to provide accurate information for fraud detection.
4. As an NRMA agent, I want to input previous incidents involving the driver to help the AI model assess the likelihood of fraud.
5. As an NRMA agent, I want to enter the estimated repair cost of the car to provide comprehensive claim details.

#### **Epic 2: Feedback Mechanism:**

1. As an NRMA agent, I want to receive a probability percentage indicating the likelihood of a claim being fraudulent so that I can take appropriate action.
2. As an NRMA agent, I want to be prompted to escalate claims with a high fraud probability for further review to ensure thorough investigation.
3. As an NRMA agent, I want to be prompted to proceed with claims with a low fraud probability to streamline the claims process.
4. As an NRMA agent, I want the system to adjust fraud detection thresholds based on ongoing data analysis to maintain accuracy.
5. As an NRMA agent, I want to receive alerts when the fraud detection model identifies a potential new fraud pattern to stay informed.

#### **Epic 3: Continuous Learning and Improvement:**

1. As an NRMA agent, I want to monitor the performance of the AI model to ensure it meets NRMA's fraud detection goals.
2. As an NRMA agent, I want to generate reports on the AI model's performance to inform stakeholders about its effectiveness.
3. As a NRMA agent, I want to implement a feedback loop to gather customer input on claim processing and fraud detection, so that we can improve customer satisfaction and make user-driven enhancements.
4. As an NRMA agent, I want to analyze and review claims post-approval for potential fraud missed during initial assessment, so that we can reduce post-claim fraud and improve detection accuracy.

#### **Epic 4: User Experience:**

1. As an NRMA agent, I want the input form to be intuitive and easy to navigate to minimize training time and user errors.
2. As an NRMA agent, I want to have access to a help section within the form to quickly resolve any issues or questions I have.
3. As an NRMA agent, I want the input form to automatically save my progress to prevent data loss in case of interruptions.
4. As an NRMA agent, I want the form to provide real-time validation of inputs to ensure data accuracy before submission.
5. As an NRMA agent, I want to have the ability to review and edit claim details before final submission to correct any errors.
6. As an NRMA agent, I want to receive feedback on the validity of each insurance claim through an intuitive interface, so that we can detect suspicious claims and process claims faster.
7. As an NRMA agent, I want to apply fraud detection across multiple insurance categories managed by NRMA, so that we can have consistent fraud detection across different insurance types.
8. As an NRMA agent, I want an intuitive form to input claims and receive fraud detection feedback, so that we can simplify the claim submission process and increase productivity.
9. As an NRMA agent, I want to receive automated alerts when a claim is flagged as suspicious, so that we can proactively detect fraud and conduct timely investigations.
10. As an NRMA agent, I want to ensure seamless integration with NRMA's existing insurance claim processing systems, so that we can maintain a smooth workflow with minimal disruption.

#### **Epic 5: Insurance Claims**

1. As an NRMA agent, I want to detect fraudulent claims for vehicle accidents and damages, so that we can reduce fraudulent payouts and increase detection accuracy.
2. As an NRMA agent, I want to identify fraudulent home insurance claims related to theft, fire, and other damages, so that we can minimise false claims and improve the claim verification process.
3. As an NRMA agent, I want to spot fraudulent health insurance claims, such as inflated medical bills or unnecessary treatments, so that we can lower fraudulent claims and enhance claim validation.
4. As an NRMA agent, I want to detect fraudulent life insurance claims, including fake death certificates or staged incidents, so that we can prevent fraudulent payouts and ensure better claim accuracy.
5. As an NRMA agent, I want to identify fraudulent claims in business insurance, such as false loss of income or exaggerated property damage, so that we can reduce fraudulent claims and improve business insurance claim handling.

#### **Epic 6: Learning and development**

1. As an NRMA agent, I want to provide transparency and educate customers on how fraud detection works, so that we can increase trust and reduce fraudulent attempts.

#### **Epic 7: Compliance and standards**

1. As a NRMA agent, I want to ensure the fraud detection system complies with insurance industry regulations, so that we can maintain regulatory compliance and reduce legal risks.

Use Case 21: Multi-Language Support

As an insurance agent, I want multi-language support in the fraud detection interface, so that we can increase accessibility and improve the user experience.

NOT INCLUDED

#### **Epic 2: Machine Learning Model:**

1. As a data scientist, I want to train the AI model using historical claim data so that it can accurately detect fraudulent claims.
2. As a data scientist, I want to incorporate economic events and seasonal variations into the AI model to enhance its accuracy.
3. As a data scientist, I want the AI model to update itself with new data to continuously improve its fraud detection capabilities.
4. As a data scientist, I want to integrate industry research into the AI model to keep it up-to-date with the latest fraud patterns.
5. As a data engineer, I want to ensure the AI model can process large volumes of data efficiently to provide real-time feedback.
6. As a data scientist, I want to analyze historical claims data to identify patterns and trends in fraudulent activities, so that we can enhance fraud detection models and better understand fraud patterns.
7. As a data privacy officer, I want to use anonymized data for training machine learning models, so that we can ensure privacy and compliance.
8. As a Data engineer, I want to leverage Azure services for scalable and efficient machine learning model deployment, so that we can ensure scalable infrastructure and efficient model deployment.
9. As a data scientist, I want to continuously train the fraud detection model with new data, so that we can improve accuracy and ensure the model is up-to-date.
10. As a data Engineer, I want to integrate third-party data sources to enhance fraud detection capabilities, so that we can improve data accuracy and enhance fraud detection.
11. As a data analyst, I want to create visual dashboards to display trends and patterns in fraudulent claims, so that we can gain better insights and make data-driven decisions.

Improvement

1. As a data scientist, I want the AI model to learn from both flagged and verified claims to continuously refine its fraud detection accuracy.
2. As a data engineer, I want to ensure the AI model can seamlessly integrate new data sources to enhance its learning capabilities.
3. As a data engineer, I want to implement regular updates to the AI model to incorporate the latest data and research findings.
4. As a data scientist, I want to incorporate feedback from agents to improve the fraud detection model, so that we can enhance model accuracy and ensure continuous improvement.