| No. | User Stories | Acceptance Criteria | Feature | Story Points |
|-------|--|---|--------------|-----------------|
| _ | As a patient, I want to access a home page and start a new case so that I can begin my skin condition assessment. | Access Home Page: Given the patient opens the application, When they navigate to the home page, Then the home page is displayed with options to start a new case and clear instructions on how to use the app. Start New Case Button: Given the patient is on the home page, When they click the "Start New Case" button, Then they are directed to the new case interface. | Image Upload | 2 |
| US_02 | As a patient, I want to access an interface to upload images so that I can provide information about my skin condition. | Access Upload Interface: Given the patient starts a new case, When they proceed to the image upload step, Then an interface appears where they can upload images. Image Selection Options: Given the patient is on the image upload interface, When they choose to upload an image, Then they can either select an image from their device or drag and drop it onto the upload section. | Image Upload | 5 |
| US_03 | As a patient, I want to select an image from my device and upload it so that it can be used for diagnosis. | The patient can select a single image file from their device. The system accepts specified formats (e.g., JPEG, JPG, PNG). | Image Upload | 5 |
| US_04 | As a patient, I want to receive a confirmation message and see a preview of my uploaded image so that I know it was uploaded successfully. | Confirmation Message: Given the patient uploads an image successfully, When the system completes the upload process, Then a confirmation message is displayed on the screen. Image Preview: Given the image is uploaded successfully, When the system processes the image, Then a thumbnail preview of the uploaded image is displayed on the interface. | Image Upload | 2 |
| US_05 | As a patient, I want the app to analyze my image and recognize basic types of skin conditions so that I can receive a preliminary diagnosis. | Model Triggers Analysis: Given the patient has successfully uploaded an image, When they click the "Analyze" button, Then the app uses the trained AI model to classify the skin condition. Initial Classification Accuracy: Given the model is trained to recognize 5 common skin conditions, When an image is analyzed, Then the prediction results are displayed based on the model's classification accuracy. | Al Diagnosis | 8 |

| US_06 | As a patient, I want to receive the diagnosis as the name of the condition so that I can understand the skin issue. | Display Diagnosis Name: Given the model completes the analysis, When a diagnosis is generated, Then the name of the skin condition is displayed clearly on the patient's screen. Readable Format: Given the diagnosis is presented to the patient, When it is displayed, Then the name of the condition is shown in an easy-to-read and user-friendly format. | Al Diagnosis | 5 |
|-------|---|---|----------------|---|
| US_07 | As a patient, I want the uploaded image to be securely stored so that I can access my report anytime. | Secure Image Storage: Given the patient uploads an image, When the upload process is successful, Then the image is securely stored in Firebase Storage with a unique case ID. Image Accessibility: Given the patient has logged into their account, When they access their case details, Then all stored images are displayed and linked to the relevant case. | Image Handling | 3 |
| US_08 | As a guest user, I want my uploaded image to be deleted after processing so that it doesn't remain stored unnecessarily. | Automatic Deletion: Given the guest uploads an image, When 5 minutes have passed after upload, Then the image is automatically deleted from Firebase Storage. | Image Handling | 2 |
| US_09 | As a guest user, I want the system to alert me if my temporary image is unavailable after the session so that I can re- upload it. | Image Unavailable Alert: Given the guest's temporary image is deleted due to timeout, When they attempt to proceed, Then the system displays an alert notifying them about the unavailability. Re-Upload Option: Given the guest's image is deleted, When they choose to upload a new image, Then the system provides an option to reupload. | Image Handling | 1 |
| US_10 | As a patient, I want clear error messages if something goes wrong during upload or prediction so that I can take corrective actions. | Error Messages for Uploads: Given the patient uploads an invalid file or encounters a failed upload, When the system detects an issue, Then an error message is displayed explaining the problem and steps to resolve it. Retry Options: Given an error occurs during upload or prediction, When the patient chooses to retry, Then the system provides a retry button to reattempt the process. | Image Handling | 1 |

| US_11 | As a patient, I want the app to recognize a wide range of skin conditions so that I can receive a diagnosis for diverse issues. | Wide Range of Conditions: Given the patient submits an image, When the diagnosis is completed, Then the app provides predictions for 20+ skin conditions with clear names. | Al Diagnosis | 5 |
|-------|---|--|--------------|---|
| US_12 | As a patient, I want the diagnosis accuracy to be improved so that I can trust the AI's results. | Model Accuracy Improvement: Given the Al model is retrained with additional data, When new predictions are made, Then the accuracy threshold meets or exceeds 80% for common conditions. | Al Diagnosis | 5 |
| US_13 | As a patient, I want to receive the diagnosis result as soon as possible so that I can act quickly if needed. | Fast Processing Time: Given the patient uploads an image for diagnosis, When the system processes the request, Then the results are displayed within 1 minute. Delay Notification: Given processing exceeds the expected time, When the patient waits, Then the system informs them of the delay and provides an estimated wait time. | Al Diagnosis | 2 |
| US_14 | As a patient, I want to receive a brief description of the diagnosed condition so that I can understand about the skin issue I am facing. | Brief Description: Given the diagnosis is completed, When the result is displayed, Then a brief description is provided in clear, understandable language, including common symptoms and causes. | Al Diagnosis | 2 |
| US_15 | As a patient, I want to receive treatment recommendations so that I can take action towards treating my skin condition. | Treatment Recommendations: Given the patient receives a diagnosis, When the system displays the result, Then evidence-based treatment recommendations are provided, including overthe-counter remedies or advice to seek professional care. | Al Diagnosis | 2 |
| US_16 | As a patient, I want to view a comprehensive report of a case so that I have a complete record of my skin condition assessment. | View Comprehensive Report: Given the patient accesses their case, When they open the report, Then it includes metadata, patient details, uploaded images, diagnosis, descriptions, and treatment recommendations. | Report | 5 |

| US_17 | As a patient, I want to download a detailed report as a PDF so that I can share it with a dermatologist or keep it for personal records | Downloadable Report: Given the patient opens their report, When they click the "Download PDF" button, Then a PDF version of the report is generated and downloaded, matching the layout of the web application. | Report | 1 |
|-------|--|---|--------------------------------|---|
| US_18 | As a patient, I want the ability to print my report directly from the app so that I can have a hard copy when needed. | Print Report: Given the patient opens their report, When they click the "Print" button, Then a printable version of the report is generated with a clear and professional layout. | Report | 1 |
| US_19 | As a patient, I want my reports to be secure and accessible only by me so that my medical data remains private. | Secure Access: Given the patient logs into their account, When they access their reports, Then the system verifies their identity and ensures only they can view the data. Data Security: Given the patient's reports are stored, When the system handles data, Then secure storage methods like Firebase and Firestore encryption are used to ensure privacy. | Report Security and Privacy | 2 |
| US_20 | As a patient, I want to view my past cases and track their statuses, so that I can monitor my health progress and stay informed about the evaluations. | Case History Access: Given the patient logs into their account, When they navigate to the "Case History" section, Then they can view a chronological list of all past cases. Real-Time Status Updates: Given the patient views their case list, When the status of a case changes, Then the system updates the status in real time without requiring a refresh. Navigation to Report: Given the patient clicks on a case entry, When the system processes the request, Then the patient is navigated to that case's report. | User Account Management | 2 |
| US_21 | As a dermatologists, I want to access and view patient reports so that I can assess their conditions and provide professional feedback. | Access Reports Dashboard: Given the dermatologist logs into their account, When they navigate to the dashboard, Then a list of all assigned patient reports is displayed. Report Sorting Options: Given the dermatologist is on the reports dashboard, When they apply sorting filters (e.g., by date, status, or patient ID), Then the system dynamically updates the displayed list. | User Account Management | 2 |

| US_22 | As a dermatologist, I want to add my diagnosis to patient reports so that I can contribute my professional assessment to the patient's case. | Select Diagnosis: Given the dermatologist opens a patient report, When they select a diagnosis from the predefined skin condition list, Then the selected diagnosis is added to the report. Submit Diagnosis: Given the dermatologist enters their diagnosis, When they click the "Submit" button, Then the report status changes to "Reviewed," and the diagnosis is visible to the patient. | Derm Review | 2 |
|-------|--|---|-------------|---|
| US_23 | As a dermatologist, I want to add comments to patient reports so that I can provide addditional guidance if necessary. | Add Comments: Given the dermatologist opens a patient report, When they enter comments in the designated text field, Then the comments are saved and associated with the report. Visibility of Comments: Given the dermatologist submits comments, When the patient views the report, Then the comments are displayed in the relevant section. | Derm Review | 1 |
| US_24 | As a patient, I want to be notified as soon as my report is reviewed by a dermatologist so that I can stay informed about my case status. | Notification Delivery: Given the dermatologist submits their diagnosis and comments, When the report status changes to "Reviewed," Then the patient receives a notification. Notification Content: Given a notification is sent, When the patient opens it, Then it includes a brief message indicating the report has been reviewed and instructions on how to view the updated report. | Derm Review | 2 |
| US_25 | As a patient, I want to access a chat interface from my report page so that I can communicate directly with a dermatologist. | Open Chat Interface: Given the patient is on their report page, When they click the "Chat" button, Then a chat window opens displaying active chat requests. | Chat | 2 |
| US_26 | As a patient, I want to message my dermatologist in real time so that I can get quick answers to my questions. | Real-Time Messaging: Given a patient initiates a chat with a dermatologist, When they send a message, Then the dermatologist receives the message in real time. Chat Features: Given a chat session is active, When messages are exchanged, Then each message includes a time stamp and typing indicators. | Chat | 4 |

| US_27 | As a patient, I want to send images to dermatologist so that I can provide additional visual information about my skin condition. | Send Images: Given the patient is in a chat session, When they select and send an image, Then the image is uploaded and displayed in the chat interface. Supported Formats: Given the patient sends an image, When the system processes the file, Then only supported formats (JPEG, JPG, PNG) are accepted. | Chat | 2 |
|-------|---|--|----------------------------|---|
| US_28 | As a patient, I want to review the chat history with my dermatologist so that I can refer back to previous discussions and recommendations. | Access Chat History: Given the patient is in an active chat session, When they open the chat interface, Then all past messages are displayed in chronological order with time stamps. | Chat | 3 |
| US_29 | As a dermatologist, I want to chat with patients in real-time so that I can provide personalized consultation and answer their questions. | Access Active Chat Requests: Given the dermatologist logs into their account, When they navigate to the chat dashboard, Then all active chat requests from patients are displayed. Real-Time Chat: Given the dermatologist accepts a chat request, When messages are exchanged, Then all messages include time stamps and attachments are supported. End Chat Session: Given the dermatologist finishes the consultation, When they click "End Chat," Then the session is closed, and the patient receives a notification. | Chat | 4 |
| US_30 | As a patient, I want to sign up an account so that I can store my basic information and access personalized services. | Patient Registration: Given the patient accesses the registration page, When they enter their full name, email, password, and date of birth, Then the system creates an account upon form submission. | User Account Management | 2 |
| US_31 | As a dermatologist, I want to sign up so that I can access patient reports and provide professional feedback. | Dermatologist Registration: Given the dermatologist accesses the registration page, When they enter their full name, email, password, and medical license number, Then the system verifies their details and creates an account. | User Account Management | 2 |
| US_32 | As a patient, I want to log in to my account so that I can manage my cases and view diagnoses. | Patient Login: Given the patient accesses the login page, When they enter their email and password, Then the system authenticates their credentials and directs them to their dashboard. | User Account Management | 1 |

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|-------|--|---|----------------------------|---|
| US_33 | As a dermatologist, I want to log in to my account so that I can manage patient reports and update case statuses. | Dermatologist Login: Given the dermatologist accesses the login page, When they enter their email and password, Then the system authenticates their credentials and directs them to their dashboard. | User Account Management | 1 |
| | | Technical Stories | | |
| TU_01 | As a developer, I want to define user stories and acceptance criteria so that I have a clear understanding of the project requirements and can prioritize tasks. | All user stories are written in the standard format: As a [user role], I want [goal] so that [benefit]. Acceptance criteria are defined for each user story. Story points is defined for each user story. User Stories, Acceptance criteria, and story points are setted in Jira. | Technical | 2 |
| TU_02 | As a developer, I want to finalize project diagrams so that I have a comprehensive visual representation of the system and its components. | Architecture Diagrams, Context Diagram, ER Diagrams, Sequence Diagram, State Diagrams, Class Diagrams. | Technical | 1 |
| TU_03 | As a developer, I want to create test cases for Sprint 1 user stories so that I can verify the initial functionality is implemented correctly. | Test cases are written for each user story included in Sprint 1. Each test case includes test objectives, preconditions, test steps, expected results, and postconditions. | Technical | 1 |
| TU_04 | As a developer, I want to write a technical paper on the project so that I can document its technical aspects and design decisions for future reference. | The technical paper is reviewed by team members. | Technical | 3 |
| TU_05 | As a developer, I want to create test cases for Sprint 2 user stories so that I can verify the new functionality introduced in the Sprint 2. | Test cases are written for each user story included in Sprint 2. Each test case includes test objectives, preconditions, test steps, expected results, and postconditions. | Technical | 1 |

| TU_06 | manual for the project so that users can easily | The Installation Manual should can assist other developers to deploy this application to the production/development environment, and indicate components and tools required to setup up the environments. The installation manual is tested by a team member or tester following the instructions to ensure accuracy. | Technical | 2 |
|-------|--|--|-----------|---|
| TU_07 | As a developer, I want to create comprehensive API documentation so that other developers can integrate with and use the API effectively. | Documentation covers all endpoints, including request methods (GET, POST, etc.), parameters, request/response formats, and example requests. API documentation is reviewed by developers and testers to ensure clarity and completeness. | Technical | 2 |
| TU_08 | As a developer, I want to create test cases for Sprint 3 user stories so that I can verify the new functionality introduced in the Sprint 3. | Test cases are written for each user story included in Sprint 3. Each test case includes test objectives, preconditions, test steps, expected results, and postconditions. | Technical | 1 |

| Sprint 1 |
|----------|
| Sprint 2 |
| Sprint 3 |