Project - NDIS Positive Behaviour Support (code: ND)

- Demo (for a later stage)

Documentation Links

Meeting Notes & Minutes	Requirements	Links	Plan	Tim eline

Development team (ND-BoxJelly)

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Recent space activity

Yuling Zheng

Do-Be-Feel List & Goal Model updated less than a minute ago • view change

Timeline updated 25 minutes ago • view change

Functional & Non-functional Requirements updated 29 minutes ago • view change

Personas updated about an hour ago • view change

Product Backlog updated about 2 hours ago • view change

Space contributors

- Yuling Zheng (less than a minute ago)
- Yang SONG (2 hours ago)
- Minyi Chen (3 days ago)
- Sihao SHEN (10 days ago)
- admin admin (20 days ago)

Requirements

Background description, client goals, motivation

Project Description

Background

This project is developed to enhance practitioners' ability to provide quality Behaviour Support Plans (BSPs) that are consistent with legislation, policy, and good clinical practice, i.e., report requirements of the National Disability Insurance Scheme (NDIS). The proposed methodology is to provide education and supporting resources through the Canvas LMS platform to upskill the relevant workforces and integrate artificial intelligence (AI) to allow the workforce to self-examine through the provision of AI-generated feedback.

Problem Domain

The proposed AI agents' training will require enormous data input and the data will be generated through the submission of the practitioners who attended the Canvas LMS module. The raw data as the committed submissions will be in PDF format, hence cannot be used directly for downstream tasks such as AI training. Meanwhile, the information contained in the raw submission should be extracted and organized in efficient formats, so they can be stored and maintained properly within a database. Given the scope of the project, there would be ongoing data input from practitioners through their daily work, therefore, the database should be scalable with the increasing demand.

Client Goals

The project team intended to provide feasible solutions to the described problem domain. The following lists the goal of the project:

- implement APIs to receive the submission of the Canvas LMS users efficiently and timely
- extract key information from the raw submission and clean the data before storing them in a structured format in the database
- design a reliable, scalable, and maintainable database
- provide easily accessible APIs to the base for other downstream tasks

Functional & Non-functional Requirements

Functional Requirements

1. Synchronisation

- When a pdf is uploaded, the database should be updated.

2. Responsiveness

- The application should be able to access external tools developed by data scientists.

Non-functional Requirements

1. Safety

- Data must be displayed correctly and unambiguously.
- Wrong feedback may cause misunderstanding to practitioners and patients.

2. Reliability

- requirements expect to operate over long periods of time. It should provide services in a correct and robust way in psite of exceptional circumstances.
    - The application shall maintain redundant backups of data for purposes of restoration in the event of data loss.
    - Failure of the application should be limited.

3.Performance

3.1. Space

- Databases should contain enough space to cater the continuous introduction of data collected, and be able to scale.
- Redundant data should be purged to maintain the space usage within the app such as deleted pdf.

3.2 Cost

- The app maintenance should remain within the budget of the client.
- The initial app should not demand an expensive architecture to be set up.

3.3 Throughput

- Throughput should match that of data being collected by the system.

Development Constraint (Process)

1. Cost

- the project development should not require funding, unless absolutely necessary.
- Usage of free development libraries is highly encouraged, unless there are no alternatives.

2. Deadline

- Development of the app should be done before the final presentation

3. Variability

- the scope should be changable during the development phase.

Reference:

Example Software Project Space, Confluence, Retrieved from: Non-Functional Requirements

Do-Be-Feel List & Goal Model

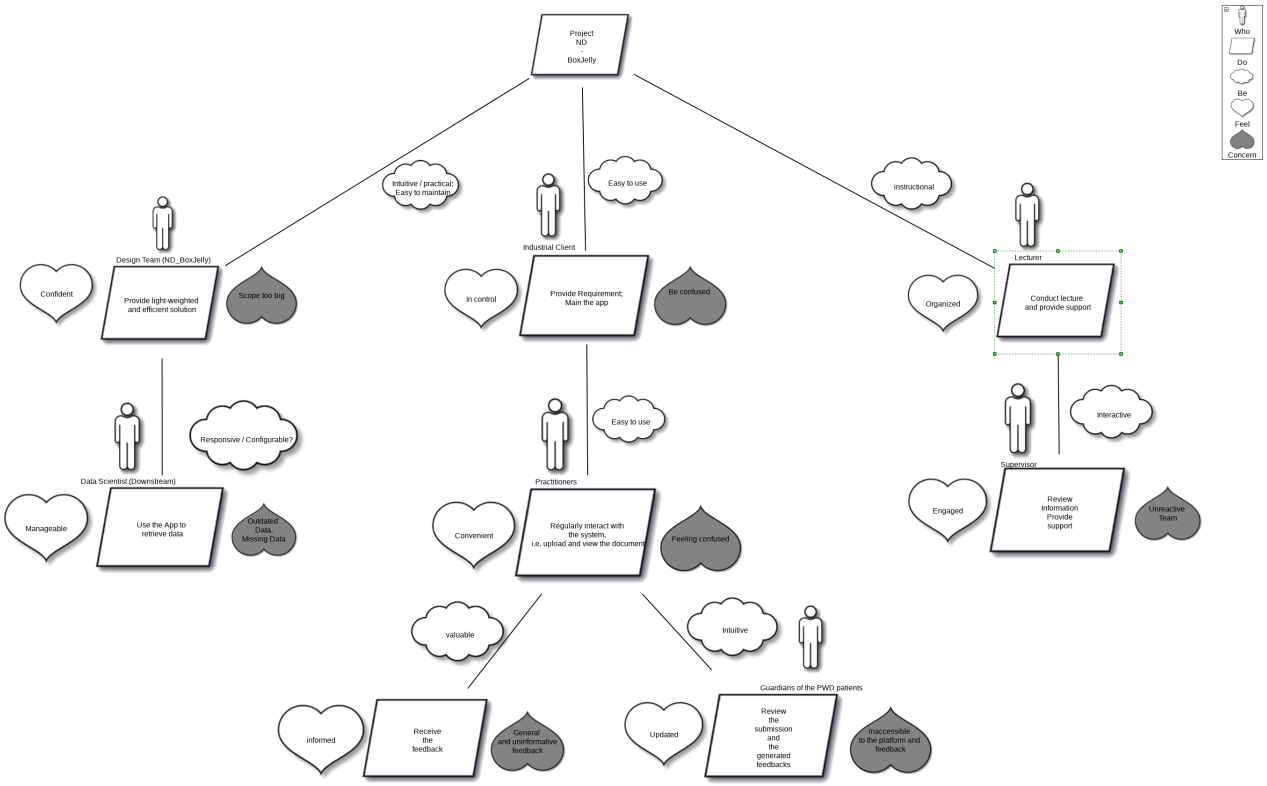
Evolution of Document

Modified Date	Individual/s Responsible	Comment
18 Aug 2022	Minyi Chen Yuling Zheng Add your names here	Summarises the overall requirements of the project based on the initial meeting with our clients. Implement the initial version of the goal model.

Do-Be-Feel List

Who	Do	Be	Feel	Concern
Design Team (ND_BoxJelly)	Provide light-weighted and efficient solution	Intuitive / practical Easy to maintain	Confident	Scope too big
Industrial Client	Provide requirements. Maintain the App	Easy to use	In control	Feeling confused when using the system
Supervisor	Review Information Provide support	Interactive	Engaged	Unreactive team
Data Scientist (Downstream)	Use the App to retrieve data	Responsive / Configurable	Manageable	Outdated data; Missing data
Lecturer	Conduct lecture and provide support	Instructional	Organized	
Practitioners	Regularly interact with the system, i.e. upload & view documents	Easy to use	Convenient	Feeling confused
	Receive the feedback	Valuable	Informed	General and uninformative feedback
Guardians of the PWD patients	Review the submission and the generated feedback	Intuitive	Updated	Inaccessible to the feedback report or the platform

Goal Model


Project
ND
BoxJelly
Who
Do
Be
Feel
Concern
Intuitive / practical;
Easy to maintain
Easy to use
instructional
Design Team (ND_BoxJelly)
Industrial Client
Lecturer
Confident
Provide light-weighted
and efficient solution
Scope too big
In control
Provide Requirement;
Main the app
Be confused
Organized
Conduct lecture
and provide support
Responsive / Configurable?
Easy to use
Interactive
Data Scientist (Downstream)
Practitioners
Supervisor
Manageable
Use the App to
retrieve data
Outdated
Data,
Missing Data
Convenient
Regularly interact with
the system,
i.e. upload and view the document
Feeling confused
Engaged
Review
Information
Provide
support
Unreactive
Team
valuable
Intuitive
Guardians of the PWD patients
informed
Receive
the
feedback
General
and uninformative
feedback
Updated
Review
the
submission
and
the
generated
feedbacks
Inaccessible
to the platform and
feedback

Personas

Type	Bio	Goals	Frustration
Nurse	Kate Marsden is a practical nurse. She is practicing to check the forms for the PWD patients. She hopes to serve the PWD patients with more professional skills through continuous practice and improvement.	• Enhance the ability to develop quality BSPs	• It would be inefficient to check submitted forms by following the rubric • No online platforms to store patients' data
The young patient	Mario is a junior school student who has developed PTSD after witnessing the death of a loved one in a car accident. He is now very resistant to go to school because every time he has to cross a road, it reminds him of the accident.	• Get quality BSPs to have a better life with the help of the government.	• Have trouble going to school • Have no idea how to have a ideal BSP • Wait too much time to get the response of BSP
The old patient	Gwen is an old lady who lives alone in the suburbs. Recently, she has been diagnosed with Alziheimer's dementia in her annual health assessment.	• Get quality BSPs to have a better life with the help of the government.	• Have trouble using complicated website • Hard to understand complex grading criteria

Sprint Artefacts

Project Planning - Sprint 2

Product Backlog

Initiative	Epics	Story ID	User	Story/Scenario	Story Estimation	MoSCoW Priority	Task	Task Estimation
Project Development	Functionality development (Backend deployment)	01	Practitioner	As a practitioner user, I can upload PDFs (Behavioural support plan) so that my report can be marked and I can receive feedback.	10	Must have	Upload PDF functionality	10
		02	Practitioner	As a practitioner user, I can receive scores / feedback corresponding to my uploaded PDFs so that I can learn and improve my reports.	10	Must have	Receive scores / feedback functionality	10
	API configuration with external modules	03	Data scientist	As a data scientist user, I can receive the data that is passed via an API so that the external module developed can be used for processing documents.	15	Must have	Link to external modules	15
	Database storage	04	Practitioner	As a practitioner user, I can view all the information uploaded in a proper way.	30	Must have	Store Personal Information about partitioners and people with disabilities	10
							Store PBSP (Positive Behaviour Support Plan) Process and other relevant information	10
							Store Positive Behaviour Support (Functions of behaviour) data	10

Total Story Points = 65

Sprint 1 - Retrospective

User Stories

Versions

VersionID	Description	Date
1.0	Initialise a user story table based on the current understanding of requirements, goal model and persona.	2022-08-22

User Story Table

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Project Development	Functionality development (Backend deployment)	01	Practitioner	As a practitioner user, I can upload PDFs (Behavioural support plan) so that my report can be marked and I can receive feedback.	Must have
		02	Practitioner	As a practitioner user, I can receive scores / feedback corresponding to my uploaded PDFs so that I can learn and improve my reports.	Must have
	API configuration with external modules	03	Data scientist	As a data scientist user, I can receive the data that is passed via an API so that the external module developed can be used for processing documents.	Must have
	Database Storage	04	Practitioner	As a practitioner user, I can view all the information uploaded in a proper way.	Must have

Links

- Trello Workspace
- Github repo

Plan

Technologies to use

- Backend in Flask (includes uploading/downloading files)
- Storing files to Amazon S3 server

Plan (arranged in order of priority):

- Make sure that the infrastructure to deploy this project is Canvas.
- Adjustments and changes are made at any time based on client feedback.
- Update information on time (meeting minutes, diagrams, technologies used in the project, user stories).
- Analyse the elements in the pdf (Artificial).
- According to the elements, system can extract the information in the pdf (java).
- System can download pdf from webpage and read (Backend in Flask).
- System can store the information read from the pdf into the database (Amazon S3 server).

Sprint 2

- As a practitioner user, I can upload PDFs (Behavioural support plan) so that my report can be marked and I can receive feedback.
- As a practitioner user, I can receive scores / feedback corresponding to my uploaded PDFs so that I can learn and improve my reports.

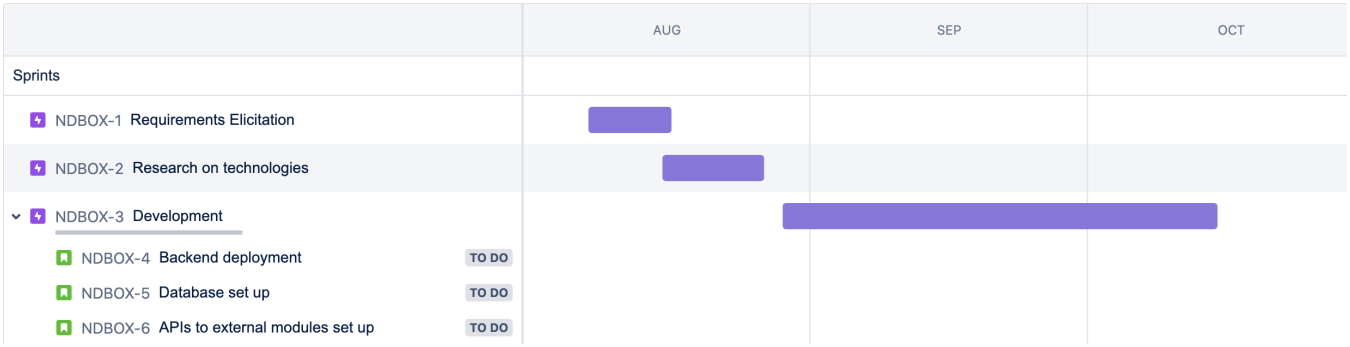
Corresponding task: backend deployment in flask

Sprint 3

- Corresponding user story: As a data scientist user, I can receive the data that is passed via an API so that the external module developed can be used for processing documents
- Corresponding user story: As a practitioner user, I can view all the information uploaded in a structured way.

Corresponding tasks: storing data; creating APIs to the external module

Timeline



Inception Phase

- The team gets a complete understanding of the project.
- The sprint backlogs will derive the tasks from product backlog user stories.
- Prioritise sprint backlogs
- Estimate story points for each user story.
- Calculate total user story points