

Project Plan for Bangkit 2023 Product-based Capstone

Team ID : C23-PC773

Team Member :

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Project Plan for Bangkit 2023 Product-based Capstone

Final Selected Themes:

SME Empowerment ▾

Title of the Project:

PinjolAI

Executive Summary/Abstract:

Problem Statement

After the covid19 pandemic, many MSMEs went bankrupt and suffered losses, causing the Indonesian economy to decline. One of the government's efforts to save MSMEs is to provide loans to banks. However, the problem that often occurs is that the MSMEs fail to pay. The high number of defaults makes some banks reluctant to provide loans.

Research Questions:

1. How to determine the feasibility of an MSME in obtaining a loan
2. How to determine the maximum loan amount allowed for an MSME

Background Information

The default can be anticipated by identifying the eligibility of an MSMEs in providing loans. PinjolAI is an application that can determine whether a user is eligible for a loan or not, and can determine the maximum allowed loan size.

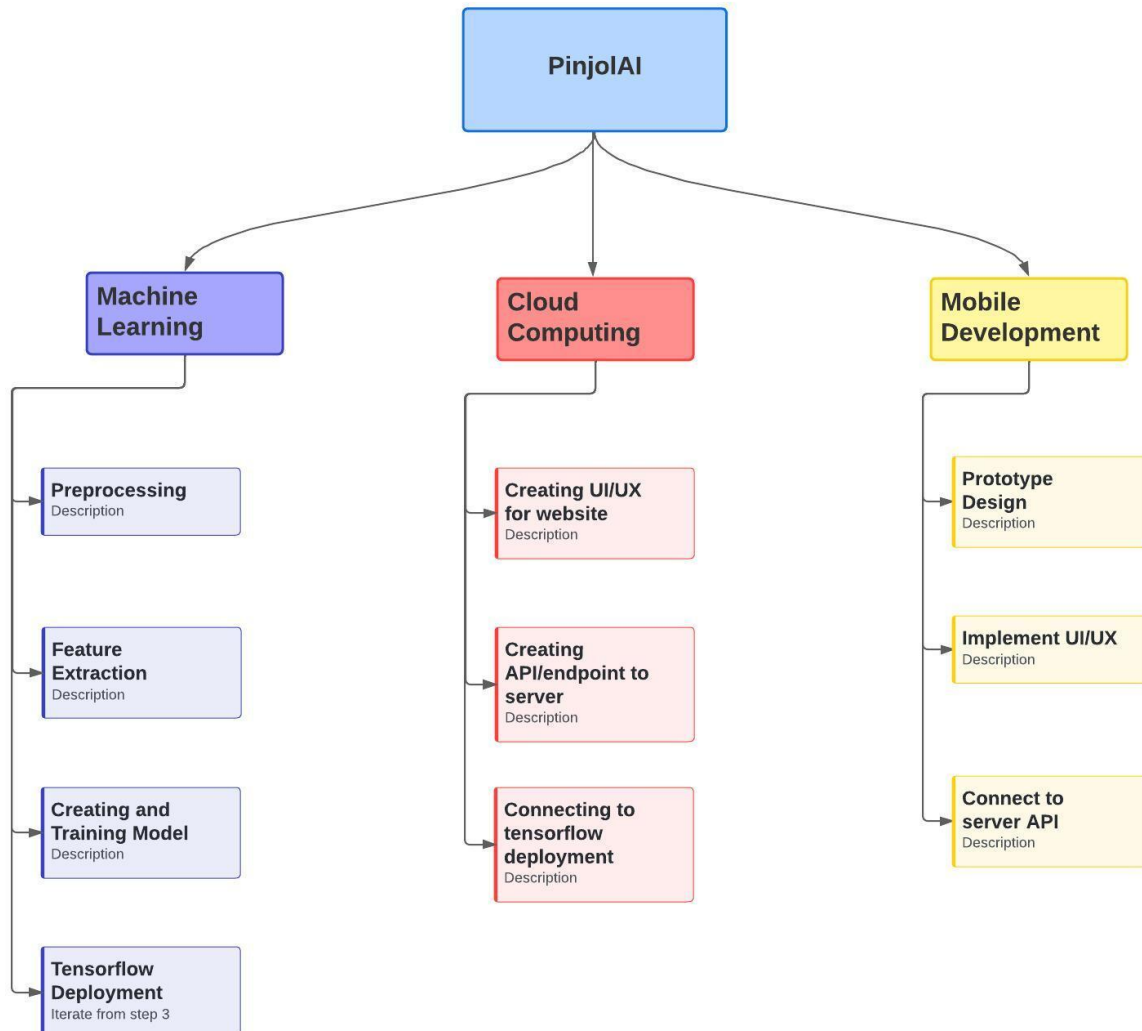
Our team wants to solve this problem so that no more MSMEs experience defaults that are detrimental to the lender. The hope is that with the provision of appropriate loans, MSMEs can maximize the money provided so as to increase profits which can indirectly help improve the economy in Indonesia.

How did your team come up with this project?

After the pandemic, MSMEs in Indonesia are experiencing very rapid growth. The large number of new MSMEs means that there is a large need to seek capital to start a business. However, sometimes creditors hesitate to provide loans. This is due to the lack of creditor trust in the debtor to return the loan within the specified time. Therefore this application is here to help creditors help determine whether an MSME business is eligible for a loan.

Project Plan for Bangkit 2023 Product-based Capstone

Project Scope & Deliverables:



Project Schedule:

Week	Activities
1	ML: Finding datasets about MSME finance CC: Create github repositories and django project initialization MD: Initialize project in Android Studio
2	ML: Do data cleaning on the datasets and feature selection CC: Create FrontEnd and backend integration. MD: Make the concept and design UI and UX

Project Plan for Bangkit 2023 Product-based Capstone

3	ML: Train the data with supervised learning (model may vary) CC: Connect Authentication (firebase) to project. Create API for mobile apps MD: Develop the application
4	ML: Optimize (select best model with the best hyperparameter) CC: Debugging MD: Debugging

Based on your team's knowledge, what tools/IDE/Library and resources that your team will use to solve the problem?

TensorFlow, VS Code, Android Studio, NumPy, Pandas, Scikit-Learn, Keras, Firebase, Django, Github

Based on your knowledge and explorations, what will your team need support for?

Find required dataset

How to deploy TensorFlow model as a backend

How to create working authentication to Django and Android Studio project

Based on your knowledge and explorations, tell us the Machine Learning Part of your Capstone!

AI will be used to determine whether loan/credit worth to be accepted or not. The model first will be trained with data of customer behavior and owned asset. For now the idea is to use ANN. The dataset will be collected from public datasets sites such as Kaggle (might change depends on situation).

Based on your knowledge and explorations, tell us the Mobile Development Part of your capstone?

The mobile development will be the main platform for this project. Using Android Studio and Flutter we will create rich UI element mobile apps. This app will be connected to an operational website in which it host the machine learning part of our project. For the most part, the apps will just communicate with back end server through API to exchange information

Based on your knowledge and explorations, tell us the Cloud/Web/Frontend/Backend Part of your capstone?

Project Plan for Bangkit 2023 Product-based Capstone

For our website, we planned to deploy on vercel in github repositories. The web shall also host the machine learning part of this project. For authentication and authorization we planned to use Firebase and possible PostgreSQL as DB. The project will be created under Django framework, in which it consist both backend and frontend part of the web.

Based on your team's planning, is there any identifiable potential Risk or Issue related to your project?

The problem that might occur is the difficulty of finding the MSME dataset

Any other notes/remarks we should consider on your team's application

It seems that there is massive imbalance in the team composition. For instance, as 2 of the inactive members are machine learning and cloud computing, our team consist of 3ML/1MD/1CC. There is also chance that this project may be rejected since we have yet to have a fixed and eligible dataset source.