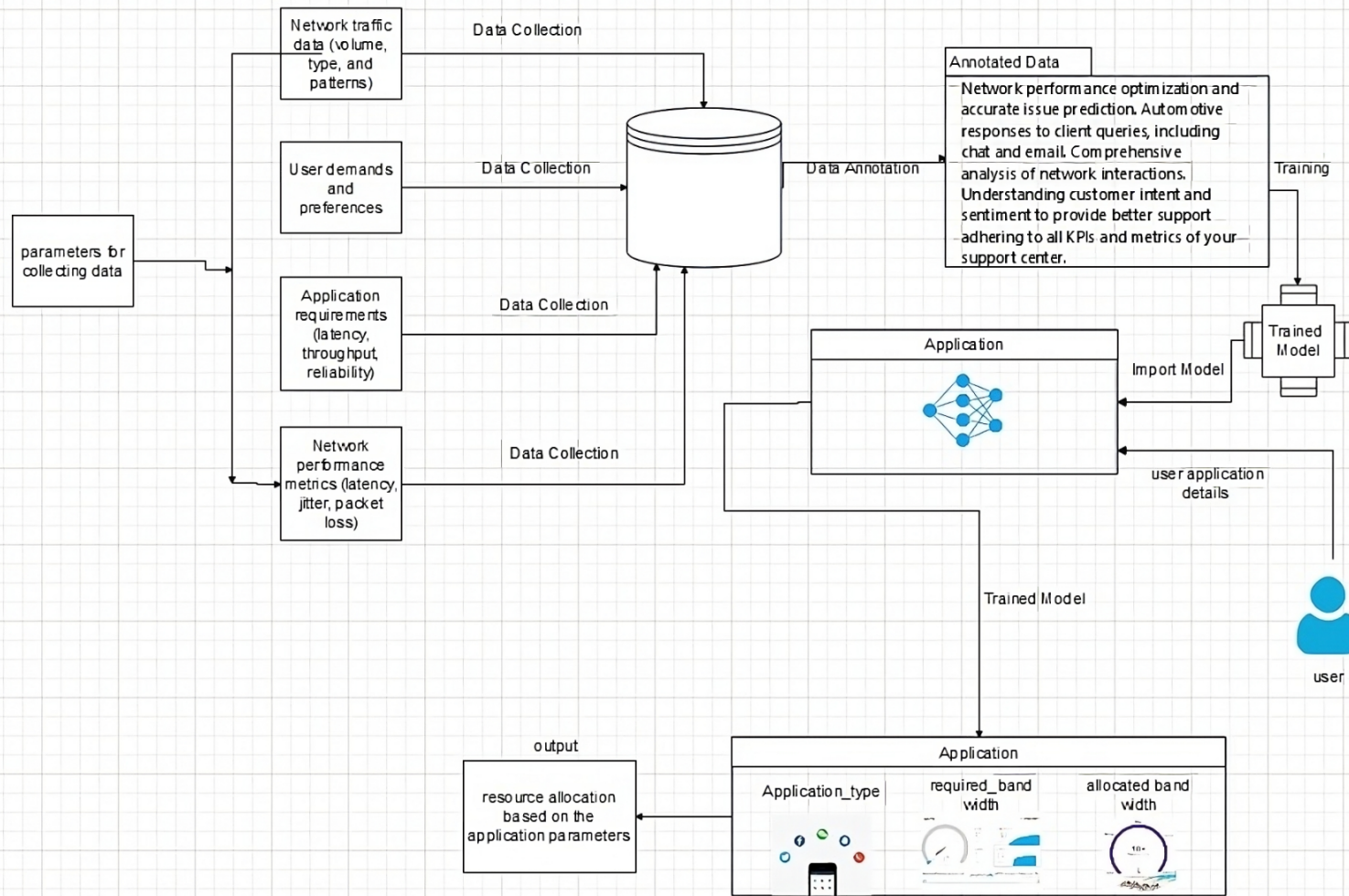


Project Design Phase-II

Data Flow Diagram & User Stories

Date	22 October 2022
Team ID	Team-591663
Project Name	AI-Driven Optimization of 5G Resource Allocation for Network Efficiency
Maximum Marks	4 Marks

Data Flow Diagram:



USER STORIES:

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Network Service Providers	Infrastructure Setup	USN-1	Set up the project's development environment with the required tools and frameworks.	Successfully configured with all necessary tools and frameworks.	High	Sprint 1
Data Scientists	Data Collection	USN-2	Gather a diverse dataset of network performance data for training AI models.	Dataset includes a wide range of network performance data.	High	Sprint 1
AI Engineers	Data Preprocessing	USN-3	Preprocess the collected dataset by cleaning, normalizing, and splitting it into training and validation sets.	Dataset is cleaned, normalized, and split correctly.	High	Sprint 2

Network Administrators	AI Model Selection	USN-4	Explore and evaluate various AI models (e.g., neural networks) to choose the most suitable model for optimization.	Explored various AI models.	High	Sprint 2
Network Operators	Model Training	USN-5	Train the selected AI model using the preprocessed dataset and monitor its performance on the validation set.	AI model performs well on validation data.	High	Sprint 3
Data Analysts	Data Augmentation	USN-6	Implement data augmentation techniques (e.g., data scaling, noise addition) to enhance the AI model's performance.	Improved AI model performance.	Medium	Sprint 3

Quality Assurance Engineers	Model Deployment & Integration	USN-7	Deploy the trained AI model as a service accessible for network optimization. Integrate the model's API into a user-friendly interface.	Model deployed and integrated, interface works as expected.	Medium	Sprint 4
User Support Team	Testing and Quality Assurance	USN-8	Conduct thorough testing of the AI model and user interface to identify and report any issues or bugs. Fine-tune the model based on user feedback and testing results.	Model and interface tested thoroughly, fine-tuned model.	Medium	Sprint 5