

Project Design Phase-II Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID35642
Project Name	Project - University Admit Eligibility Predictor
Maximum Marks	4 Marks

Technical Architecture:

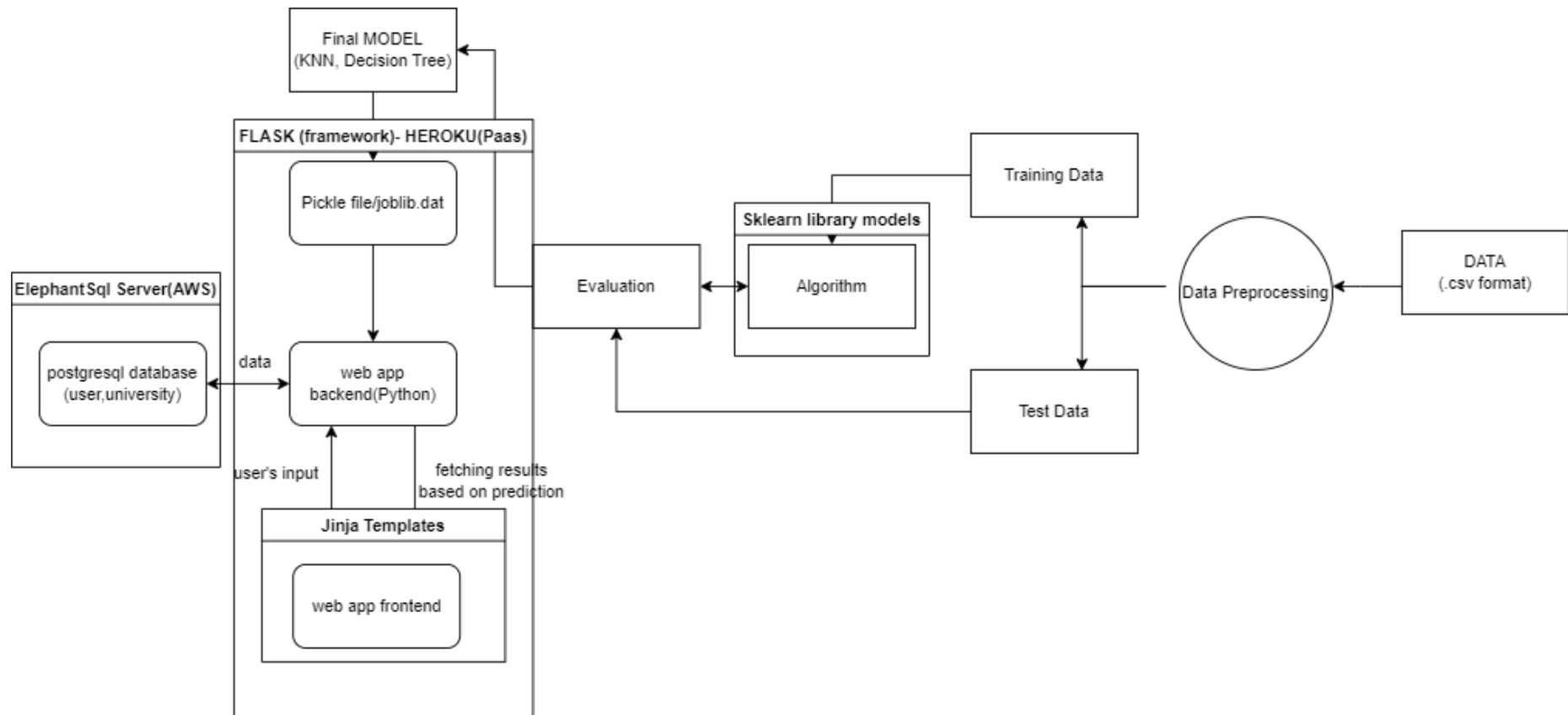


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
	User Interface	User interacts through web UI	Flask's Jinja HTML templates
	Model extraction	Extracts pickle/joblib.dat file to ML model	Flask backend -Python
	User input parsing	Parses user given filter and selection inputs	Flask backend -Python
	Prediction	Use of database and user input to predict	Flask backend-Python
	Database	Storage of user,university data	PostgreSQL
	Cloud Database	Aws based postgresql server	ElephantSQL sever
	Machine Learning Model	To predict eligibility for university admission	Different ML libraries like sklearn,etc.
	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration:8088 Cloud Server Configuration :	Hosted on Heroku for cloud , on port 8088 for local

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python based web development framework	Flask
2.	Security Implementations	User authentication on login/signup	Postgresql databse/OAUTH2 client
3.	Scalable Architecture	Use of cloud services to address scalability	Heroku and elephant sql
4.	Availability	Cloud services use load balancers behind scences and ensure availability	Heroku and elephant sql
5.	Performance	Cloud services provide elasticity and optimize performance to handle many requests per second	Heroku and elephant sql

References:

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture>

<https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>