

Cancer Outcome and Recurrence Prediction Tool

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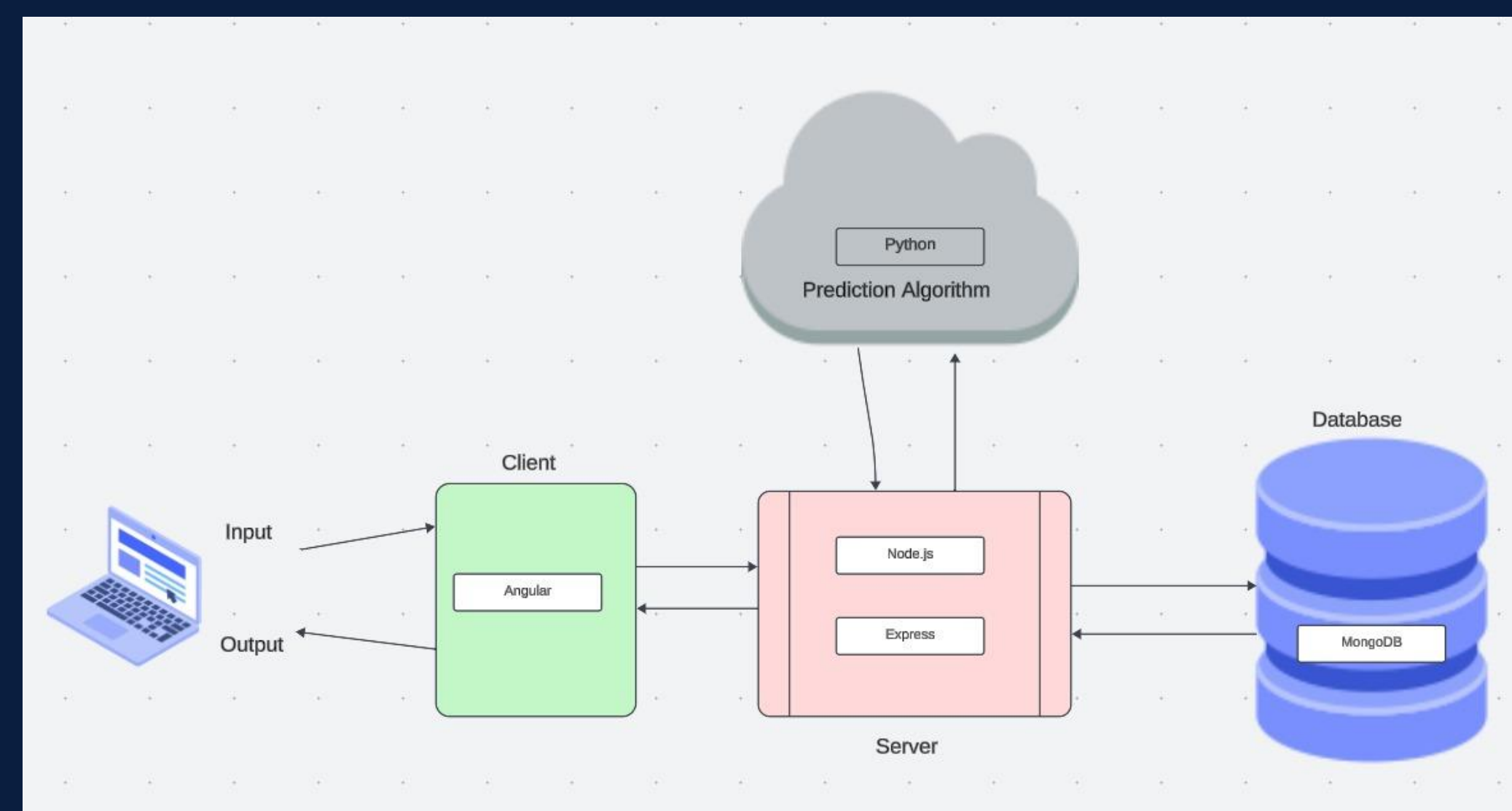
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PROBLEM

Our product owner is developing a Machine Learning algorithm that will predict outcomes and recurrence probability for patients with cancer. We were tasked with creating a web app that will allow a physician to provide input parameters for the ML process.

SYSTEM DESIGN



REQUIREMENTS

As this application deals with people's medical information, security is a requirement. We have implemented an account system to protect patient data.

Register

	Email address
	User Name
	Password

Already have an account? [Login here](#)

Log in

	User Name
	Password

Don't have an account? [Register here](#)

ACKNOWLEDGEMENT

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IMPLEMENTATION

Add a New Patient

Patient Entry

Patient ID:

Diagnosis Age:

Sex: ☐ Male ☐ Female

Race: ☐ American Indian or Alaska Native ☐ Asian ☐ Black/African American ☐ Native Hawaiian/Other Pacific Islander ☐ White ☐ None

Patient Weight:

Cancer Entry

OncoTree Code: ☐ ICD ☐ ICD ☐ ICD ☐ None

Cancer Type Detail: ☐ Uterine Endometrial Carcinoma ☐ Uterine Mixed Endometrial Carcinoma ☐ Uterine Serous Carcinoma/Uterine Papillary Serous Carcinoma ☐ None

Tumor Type: ☐ Endometrial Endometrial Adenocarcinoma ☐ Mixed Serous and Endometrial Carcinoma ☐ Serous Endometrial Adenocarcinoma ☐ None

Grade: ☐ G1 ☐ G2 ☐ G3 ☐ HIGH GRADE ☐ None

Tissue Source Site Code:

Aneuploidy Score:

PREDICTION TOOL

Patient Information

Select Patient:

Diagnosis Age:

Weight:

Race:

Current State of Illness

Cancer Type:

Cancer Grade:

Tumor Weight:

WHO Code:

Other

Diabetes:

Congestive Heart Failure:

Hypertension:

Dyspnea:

Previous Treatments

Treatment Type	Agent	Cycle Number	Dosage
Radiation Therapy	Radiation 1	0	0
Radiation Therapy	Radiation 2	0	0
Chemotherapy	Paclitaxel	0	0
Chemotherapy	Carboplatin	0	0

SUMMARY

The app seeks to provide physicians with control over input parameters that will be fed to the machine learning model and provide the output for the machine learning model as clear numbers, graphs, and charts.

TECHNOLOGIES USED



Patient List

ID	Action
TCGA-2E-A9G8	View Treatment
TCGA-4E-A92E	View Treatment
TCGA-5B-A90C	View Treatment
TCGA-5S-A9Q8	View Treatment
TCGA-A5-A0G1	View Treatment
TCGA-A5-A0G2	View Treatment
TCGA-A5-A0G3	View Treatment
TCGA-A5-A0G5	View Treatment
TCGA-A5-A0G9	View Treatment
TCGA-A5-A0GA	View Treatment
TCGA-A5-A0GB	View Treatment

REFERENCES

<https://www.mongodb.com/resources/languages/mean-stack-tutorial>
<https://nodejs.org/docs/latest/api/>
<https://expressjs.com/>
<https://v17.angular.io/docs>