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AUTOMATIC LEGAL JUDGMENT PREDICTION VIA LARGE AMOUNTS OF CRIMINAL CASES USING BLOCKCHAIN TECHNOLOGY

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A B S T R A C T

A promising tool to maintain trust between parties is blockchain. We can create a secure communication paradigm using this technology that ensures data integrity and immutability. These innate characteristics highlight blockchain as an appropriate technology to Over the past few years, there has been increasing interest in predicting court decisions. Prior attempts relied on conventional prediction methods based on Bag of Words (BoW), which had low accuracy because the order of the words was ignored. Using end-to-end block chain technology, we provide a prediction model for criminal cases from the Supreme Court for this system. In our model, recurrent neural networks read the facts from an input case and use the attention mechanism to compare them to pertinent legal provisions, simulating the process of legal interpretation. The model's output indicates whether a person is guilty of a crime in light of the evidence and the legislation. After a performance test, we discover that our model could produce results that were superior to those produced by Blockchain Technology and other conventional text classification methods. It includes the skilfully extracted factual text from each judgement, text from the Criminal Code, and binary-format labels that correspond to the theoretical structure of criminal law. This dataset is helpful for both forecasting judgement and simulating actual criminal case trials.

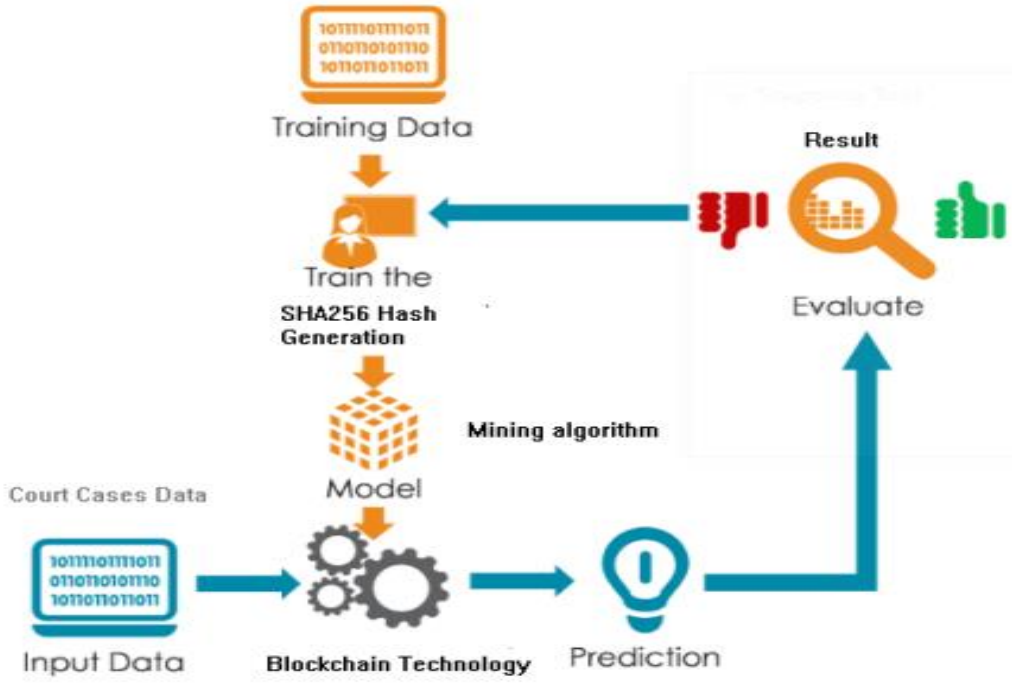
Keywords: Block Chain Technology, Prediction, Feature, Classification , Automatic Judgment, semantic similarity

Introduction

The materials of criminal cases not only contain lots of information such as time, place, parties, and description, but also are often quite long. It is difficult for machines to handle long distance dependency, and pay attention on most important information. “Justice delayed is justice denied” and this delaying of justice is a great bane for the Indian justice system. Every year, illimitable cases remain pending just for the final hearing of judicial verdict. Years pass-by keeping the plaintiff waiting for justice. For years, this is a major issue faced in the Indian judicial system. In this project, we are attempting to condense the problem by decreasing the number of cases before it reaches the Court. This is done by extending help to the legal professionals to predict a case output from previous records. This project focuses on cases related to ‘Dowry Death’ i.e. IPC section 498A and 304B. It aims to deliver justice by predicting judicial argument-based analysis using the Support Vector Machine (SVM) algorithm to find its accuracy

Structure

By using this technology, we can establish a secure communication paradigm, where data integrity and immutability can be guaranteed. These inherited features underline blockchain as a suitable technology to Predicting court judgment has gained growing attention over the past years. Prior attempts used traditional prediction techniques based on Bag of words (BoW), where the order of words is discarded, resulting in low accuracy. In this system, we propose a prediction model of criminal cases from Supreme Court using End-to-End Block chain technology. Our model imitates a process of legal interpretation, whereby recurrent neural networks read the fact from an input case and compare them against relevant legal provisions with the attention mechanism. The model’s output shows if a person is guilty of a crime according to the fact and laws. After the performance test, we find that our model could yield the higher than traditional text classification techniques including Blockchain Technology .



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MATHEMATICAL MODEL

$$P(A \mid B) = \frac{P(B \mid A)\, P(A)}{P(B)}$$

Let
S is the Whole System Consist of S= {I, P, O}.
Where,
I = input
I = U, J, P, A
U = User
U = {u1, u2,. . . ..un}
A = Advocate.
J = Judge.
P =Police .
P = Process
P =I, F,
F = Functions.
F = UP, VR, PR
VR = Verification user data.
UP = Upload Data.
Procedure: files petition Shows result and duration of similar cases

Algorithms

1.MiningAlgorithmforvalidhashcreation:

Input: HashValidationPolicyP[],CurrentHashValueshashVal
Output: Validhash
Step1:SystemgeneratethehashValforithtransactionusingAlgorithm1
Step2:if(hashVal.valid withP[])
ValidhashFlag=1ElseFlag=0Mineagain randomly
Step3:Returnvalidhashwhenflag=1

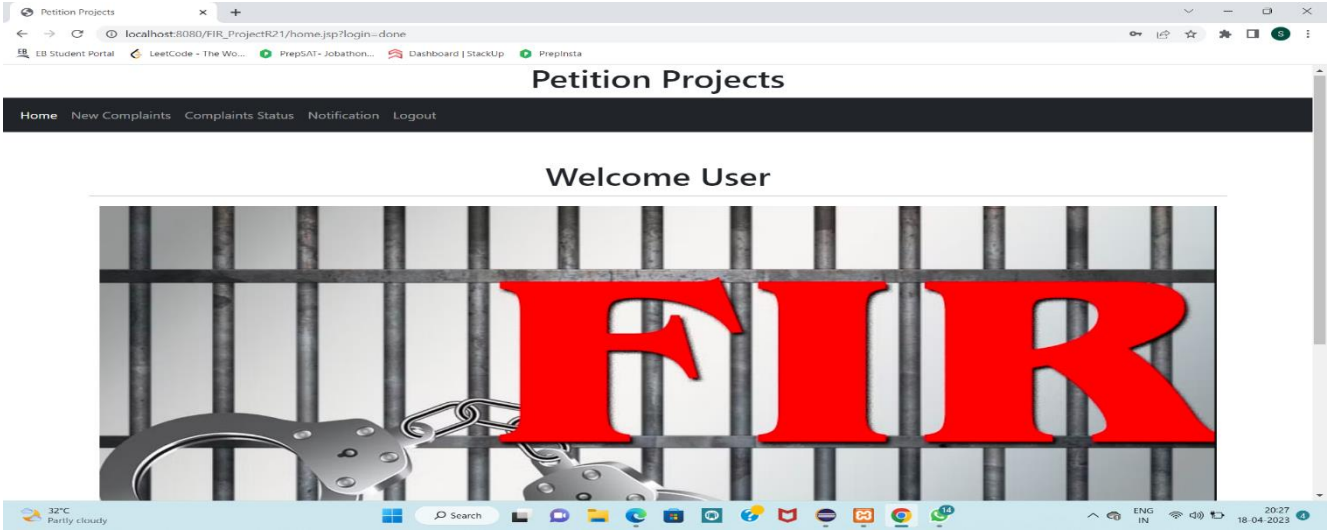
2.Naive Bayes Classifier Algorithm
Step 1: procedure TRAINNAIVEBAYES
Step 2: X Extract Feature
Step 3: N Count Values
Step 4: for each c Є Class
Step 5: Do Nc Count Values in c
Step 6: prior [c] Nc / N
Step 7: do μ ∑ (Xi) Nci=1
Step 8: do σ2 1/ Nc ∑ (Xi − μ)2 Nci=1
Step 9: for each V Є X
Step 10: do condprob [v][c] LUT
Step 11: return prior, condprob

Acknowledgements

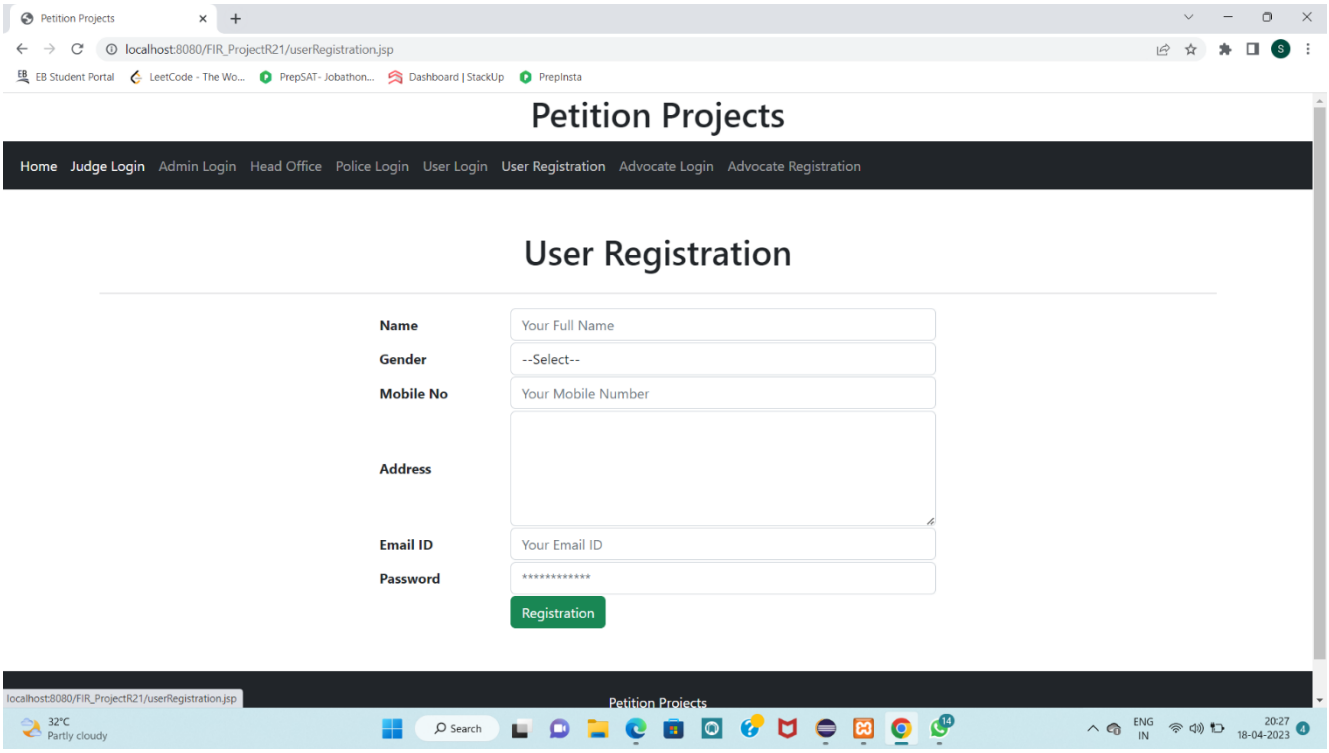
We express our sincere gratitude towards the faculty members who makes this Project Stage-II a successful. We would like to express thanks to our guide Prof. Gunjal .T.S for his whole hearted co-operation and valuable suggestions, technical guidance throughout the seminar work. Special thanks to our H.O.D. Prof. Shegar S.R. for his kind official support given and encouragement. We are also thankful to our project coordinator Prof.N.J. Chaudhari for his valuable guidance. Finally, we would like to thank to all our staff members of Computer Engineering Department who helped us directly or indirectly to complete this work successfully

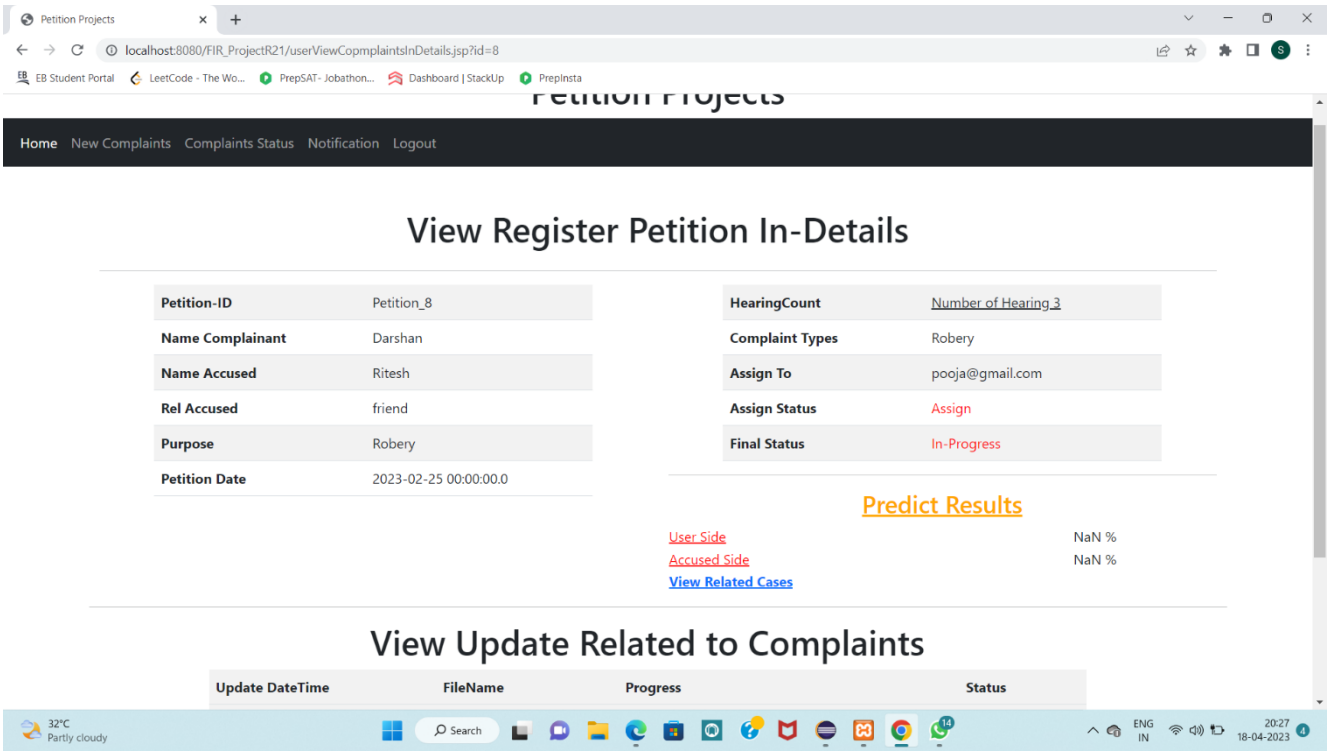
Result

Home page

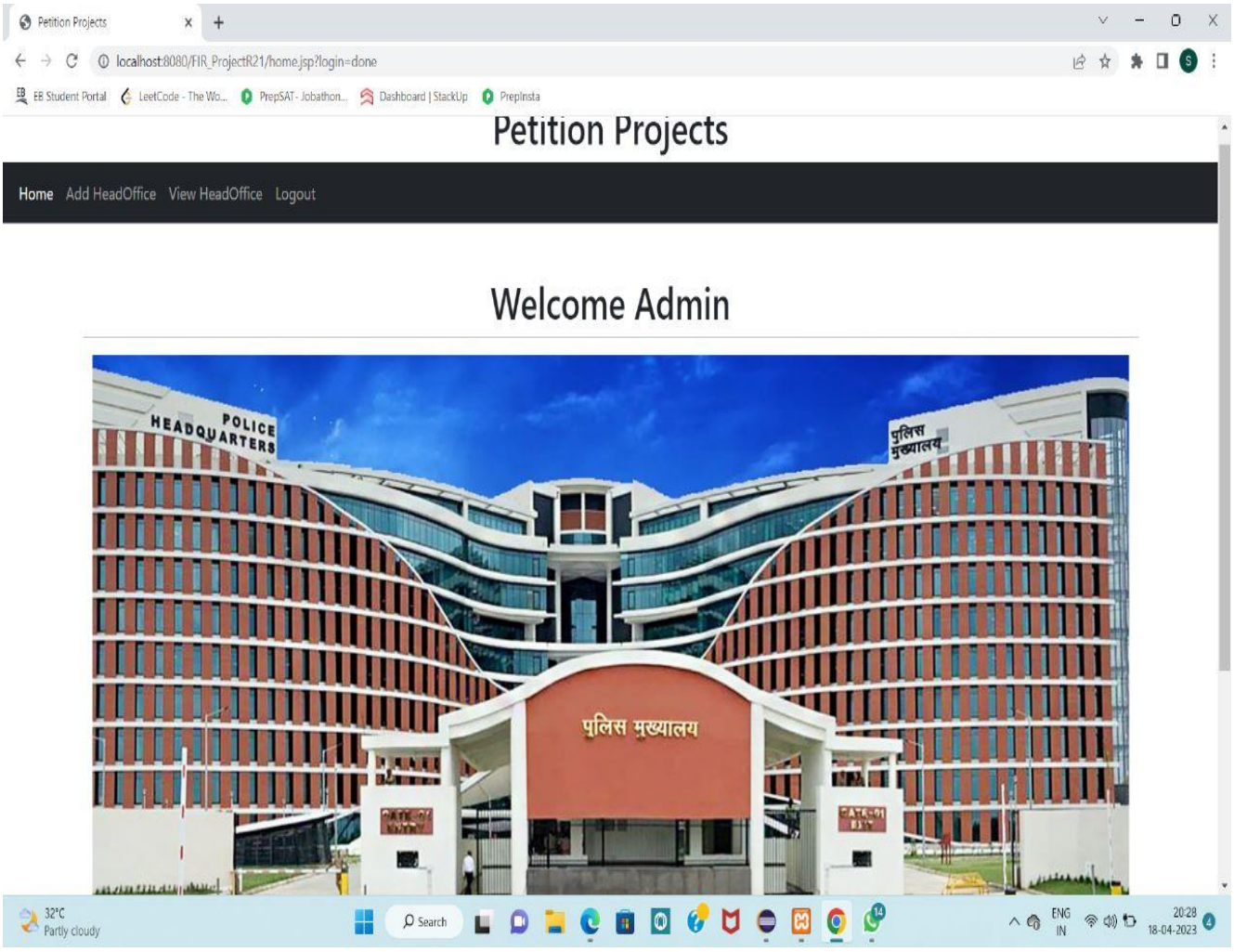


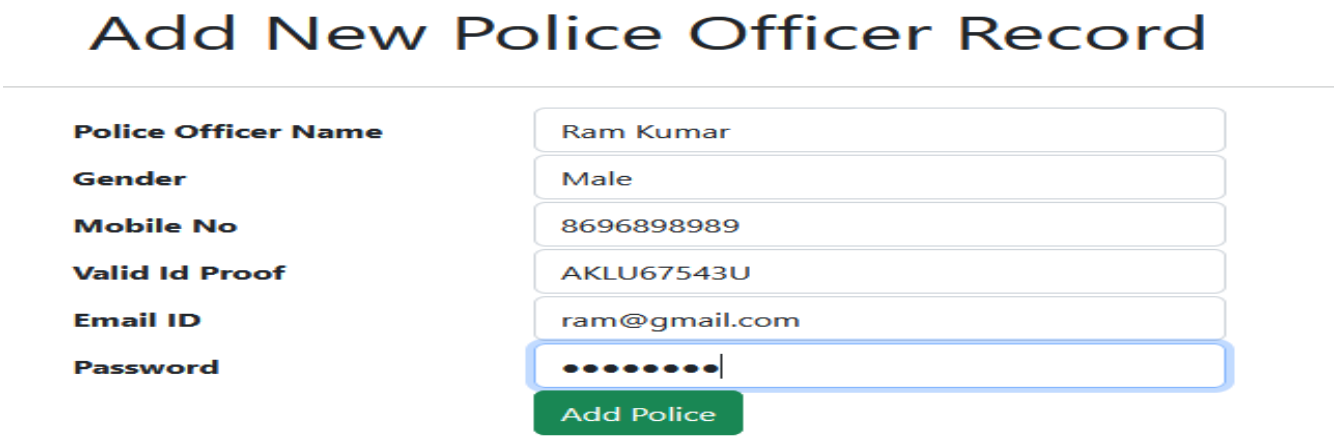
User registration


Petition Projects
localhost:8080/FIR_ProjectR21/userRegistration.jsp
Petition Projects
Home Judge Login Admin Login Head Office Police Login User Login User Registration Advocate Login Advocate Registration
User Registration
Name
Your Full Name
Gender
--Select--
Mobile No
Your Mobile Number
Address
Email ID
Your Email ID
Password
Registration


Petition Projects
localhost:8080/FIR_ProjectR21/userViewCopmplaintsInDetails.jsp?id=8
Home New Complaints Complaints Status Notification Logout
View Register Petition In-Details
Petition-ID Petition_8
Name Complainant Darshan
Name Accused Ritesh
Rel Accused friend
Purpose Robery
Petition Date 2023-02-25 00:00:00.0
HearingCount Number of Hearing 3
Complaint Types Robery
Assign To pooja@gmail.com
Assign Status Assign
Final Status In-Progress
Predict Results
User Side NaN %
Accused Side NaN %
View Related Cases
View Update Related to Complaints
Update DateTime FileName Progress Status

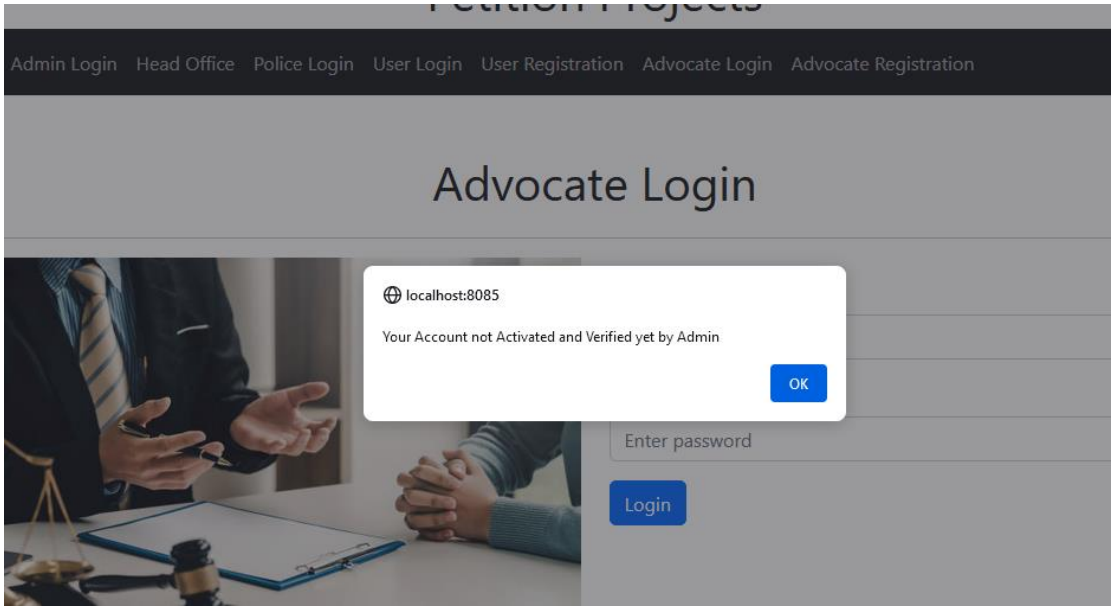
Admin Login





Showing similar cases

Authentication of Advocate



CONCLUSION

In India, due to a shortage of skilled manpower and infrastructure, beneficiaries have to wait for a long time to get their well deserved justice. As it is rightly said that "Justice Delayed Is Justice Denied", the prolonged legal proceedings also leads towards various. consequences, like hostility of witnesses, unfitness of the accused on medical grounds, tampering, or manipulation of shreds of evidence, etc. The proposed model will help legal professionals to analyze the desired data set and perform prediction on case to case basis depending on the essential parameters of cases by using block chain technology

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