Project Management Web-Application with Data Analytics
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Introduction
This application provides a platform to manage projects, along with client activity tracking to offer present and future insights about the project. It also leverages the blend of web technologies and data analytics to offer a smart solution to a technocrat to get analytical feedback on the work. Data mining helps businesses and application owners to improve products based on the historical data. This application builds on top of the concept of finding web-usage patterns and making use of it to improve the experience for web-client from paper [3]. The application offers usage analysis and data analytics to predict the popularity of a project along with project management utility.

Objective
- Develop a web application that provides project management to offer project upload, download, explore and search functionality.
- Provide client activity analysis and project popularity prediction using data analytics.
- Use blend of data mining and web technologies to improve overall client and application owner experience.

Implementation

Project Management

- SOA web application is developed with the aid of Spring MVC, Angular JS, MySQL and Java [1].
- Angular JS supports the user interface and glues together the frontend and backend and MySQL database stores the client activity

Project Popularity Prediction

1. Dataset of 1000 instances is used for the project popularity prediction using J48.
2. All the information about the project such as project type, prime technology is recorded by the project owner while uploading the project and used later on for building the model [2].

Results

Client Activity Analysis
Client activity is recorded and presented as following:
1. Most read files from projects
2. Most downloaded files from projects
3. Most accessed projects
4. Most downloaded projects

Below result images are captured directly from the application.

Project Popularity Prediction
1. Pie chart representing division of low, average and high popularity number of projects.
2. The second result is a table listing down the projects as per their popularity.

References
1. Spring and Angular JS integration example - https://github.com/thysmichels/cloudsole-angular
2. Integrating an Advanced Classifier in WEKA by Paul, Stefan Popescu, Mihai Mocanu and Marian Cristian Mihaescu
3. Web Usage Mining: Discovery and Applications of Usage Patterns from Web Data by Jaideep Srivastava, Robert Cooley, Mukund Deshpande and Pang-Ning Tan

Conclusion
1. A framework has been developed with the blend of web technologies and data analytics with no compatibility issues.
2. Real time analysis of the client usage along with data mining is achieved with the help of Spring 3, Angular JS and Weka.
3. J48 classification has been chosen as the major classification technique as it provides better performance.

Future Work
1. Use of HTTPS and better security mechanisms to protect the application from security threats.
2. Use load balancing technologies to improve application reliability.
3. More data mining capabilities and contexts could be added.
4. Use of cloud server.

Note: Please ask for a demo.