**ppt1**

老师们、同学们大家好，今天由我来代表我们组分享一下我们的JavaEE期末项目，Stocking，一个轻量级的股票数据展示、分析平台。

Hello, everyone. Today I will share you our JavaEE final project, Stocking. It is a lightweight stock data display and analysis platform.

**ppt2**

今天我的演讲主要分为一下四个方面：项目灵感来源、项目的简要概述，包括功能点和创新点、项目的总体框架和用户使用流程、以及最后会涉及我们的计划安排和所使用到的团队协作工具。

My speech today is divided into four main areas: First I will introduce our project inspiration. Then I will give a brief overview of our project, including functional points and innovations. And the third part will include the overall framework of our project and the workflow from the end-users' perspective.ultimately, I will involve our plan schedule and some teamwork tools we will use during the development.

OK, let`s start.

**ppt3**

所以，为什么我们小组会想到这样的一个项目呢？让我们来看看当前的一些能够查询股票信息的平台，举个例子：新浪财经。

So, why does us want to do such a project? Let us look at some of the current platform which can view stock information, for example: Sina Finance.

**ppt4**

左边这张图就是新浪财经查看一只股票的界面。我们可以看到这个界面涉及到各种各样、错综复杂的信息。事实上，并不是所有的信息都对用户有用。比如说一些广告、热点栏目推荐等等。

As you can see, this picture on the left is the interface of the Sina Finance to view a stock. We can see that this interface involves a variety of, intricate information. For example, self-stocking, Basic stock quotation, some advertisements and news. In fact, not all information is useful to users. For example, some ads, hot topics recommended that users may don`t like.

因此，我们想在新浪财经的基础上，实现一款轻量级的股票数据展示、分析web平台。舍弃一些多余冗杂的信息，加上一些跟数据挖掘、机器学习有关的全新内容。

So, we would like to achieve a lightweight stock data display and analysis web platform based on Sina Finance. However, we will discard some redundant information, coupled with some new technology, like data mining, machine learning, which I will talk about it later.

**ppt5**

接下来是对我们的项目的一个简要概述

The following is a brief overview of our project

**ppt6**

我们的项目名叫Stocking，这个是我们的logo。这个logo的灵感来源于股票的Stock和长袜的Stocking类似，于是我们就决定把这个可爱的Stocking作为我们的项目logo。

Our project is called Stocking, this is our logo. The logo comes from that the word Stockings Stock and Stockings are the same in English, so we decided to use this lovely Stocking as our project logo.

**ppt7**

我们的项目主要包括如下的四大板块

OK, the important part comes. Our project includes the following four major sections

第一部分：市场行情

The first part: market conditions

- 用户可以在这个板块查看当前上证、深证两大A股板块的所有的股票的行情数据，包括实时的分时图，历史数据的日K图、月K图、年线图等。该板块的展示会不限于简单的把所有信息罗列，而是会按照不同的行业板块，将个板块的股票分块展示，加入直观可视化的内容，让用户能够更加直观地感受到股票行情的变化
- Users can view all the stock data of the current stock market in Shanghai and Shenzhen Stock Exchange, the two A-share stocks plates , including real-time Time-sharing map, historical data of day-Candlestick Charts, month-candlestick charts, and annual charts. The display of the plate is not limited to a simple list of all the information, but will be in accordance with the different sectors to display the stock data, adding intuitive visual content, allowing users to feel the stock market changes more intuitively.
- 同时用户可以选择自己感兴趣的股票，加入到自选股板块，方便自己实时追踪行情变化。同时自选股板块的股票，会影响到之后平台对用户推荐的热点新闻内容
- At the same time, users can choose their own stocks of interest, adding to the self-stock plate,to track their changes. Stocks at the self-stocking plate will affect the hot news that our platform recommended to users.
- 同时，因为股票行情数据可以认为是时间序列，我们会尝试利用机器学习的思想，对股票行情进行分析，并且最终尝试给出一个简单的未来行情预测。
- Because stock market data can be thought as a time series, we try to take advantage of the idea of machine learning to analyze stock quotes and finally try to give a simple predict of the future market.

第二部分：新闻追踪

The second part: news tracking

- 这部分平台会向用户推荐两大信息内容，第一部分是热点新闻追踪。这一部分的新闻会针对用户进行个性化推送，主要依赖于用户所选择的自选股及其对应的板块，我们会尝试分析用户的爱好和需求对其进行个性化的信息推送。
- In this part, our platform will recommend two major content to the users, the first part is hot news tracking. This section of the news will be personalized for users, mainly dependent on the user-selected sections in the self-stocking plate, we will try to analyze the user's hobbies and needs to customize information and news.
- 第二部分是市场地雷，这一部分的内容主要会涉及到由证监会发布的一些最新市场公告内容。
- The second part is market mines. The content of this part mainly refers to some of the latest market announcements released by the CSRC.

第三部分：龙虎榜

The third part: the winner list

- 这一部分的数据主要是来自于新浪财经，包括最近几个交易日内，一些因为其异常的涨跌幅、成交量等而上榜的股票信息，我们同样会将该部分内容以更加直观的方式展现出来。
- This part of the data is mainly from Sina Finance, including some stocks that they had unusual ups and downs, volume and other information in recent days, , we also will use more intuitive way to show the contents.

第四部分：基本面数据

The fourth part: the fundamental data

- 这部分的数据主要包括股票对应公司的一些历史相关信息，如盈利能力、运营能力、成长能力等等五个部分。该数据的来源是新浪财经的一个第三方接口
- This part of the data mainly includes the stock company's history-related information, such as profitability, operational capacity, growth ability and so on five parts. The source of this data is a third party api of Sina Finance which I will talk about it later.

**ppt8**

OK, here comes the creativities in our project.

由于股票数据的特点：数据量大、可以分为实时更新数据、历史数据。我们尝试在我们的项目中涉及如下几个原理或者思想

Due to the characteristics of stock data: a large amount of data, can be divided into real-time updated data, historical data. We try to include the following principles or ideas in our project

数据仓库

warehouse

- 在股票数据中，存在着大量的历史行情数据和基本面数据，这些都是一个面向主题的（Subject Oriented）、集成的（Integrate）、相对稳定的（Non-Volatile）、反映历史变化（Time Variant）的数据集合，因此，我们会尝试利用数据仓库的思想，对这些数据进行存储。
- In the stock data, there are a lot of historical market data and fundamental data, which are a subject-oriented, integrated, non-Volatile, reflect the historical changes (Time Variant ) Data collection, so we will try to use the data warehouse thinking to store the data
- 比如说，为了方便我们之后的对股票数据的分析，我们可以在设计是有意引入冗余，进一步挖掘数据资源、为了决策需要。
- For example, in order to facilitate our later analysis of stock data, we can deliberately introduce redundancy in the design, to further tap the data resources, in order to make policy needs.

数据挖掘、机器学习

data mining, machine learning

- 我们会尝试利用数据挖掘、机器学习这两大手段，对我们所得到的股票行情进行一个简单的分析、预测。
- We will try to make use of data mining, machine learning these two technologies, to give the stock condition a simple analysis and prediction.

- 对于股票交易来说，我们可以理解其由三大部分组成：归纳、演绎、博弈。事实上，市场在变，规律在变，历史可能重演，但是又不尽相同。而机器学习对于股票的分析不过基于历史数据进行拟合的**归纳法**罢了。
- For stock trading, we can understand that it consists of three major components: induction, deduction, game. In fact, the market is changing, the law is changing, history may repeat itself, but it will not be the same.So if we use machine learning for stock analysis, it just based on historical data to fit the induction.
- 但是我们希望能够以此为机会，能够对数据挖掘、机器学习的一些算法有一些更好的认识和了解，比如用于时间序列分析的LSTM算法。同时我们也可以在热点新闻方面，利用SVM算法，对其文本情感做一个分析，尝试找出该新闻对未来行情的影响。
- However, we hope to use this as an opportunity to have some better understanding of some algorithms for data mining and machine learning, such as the LSTM algorithm for time series analysis. At the same time, we can make use of the SVM algorithm to analyze the text sentiment in hot news and try to find out the impact of the news on the future market.
- 当然，我们不认为自己能够实现一个很好的分析、预测算法。但是如果能够借此机会，加深对这方面的知识的学习和了解，我想我们是能够收获颇丰的。
- Of course, we do not think we can implement a good analytic, predictive algorithm. However, if we can take this opportunity to deepen the study and understanding of this area of knowledge, I think we can reap great results.

**ppt9**

接下来，我会对我们项目的整个框架和用户使用流程做一个简单的阐述。

Next, I will give a brief account of the entire framework and the workflow from the end-users' perspective.

**ppt10**

这张图展示了我们的整个项目框架

首先是左边的数据、信息获取部分

This picture shows our entire project framework

The first is the data and information acquisition section

- 我们的数据来源主要是两个，第一个是一个新浪财经的第三方数据接口，tushare。我们会从中获取基本的股票行情、公司信息和基本面数据
- 第二个是利用webmagic这个java的爬虫框架，去爬取用户感兴趣的热点新闻、公告等内容

- Our data is mainly two sources, the first is a third-party data API for Sina Finance, tushare. We get basic stock quotes, company information and fundamentals data
- The second is to use webmagic this java spider framework to get hot topics new of interest to users, announcements and other content

然后是我们的数据库

- 我们的事务性存储方面使用的数据库是MySQL，这里面会存储当前的实时股票行情数据。对于历史数据，我们当前的思路也是存在MySQL中，与实时数据的存放在不同的表里面。之后可能会根据使用情况再做调整。
- The database we use for transactional storage is MySQL, which stores the current real-time

stock quotes. For historical data, our current thinking is also existing in MySQL, and stored in different tables comparing real-time data . After that may be adjusted according to usage.

数据分析、预测方面

data analyze & predict

- 主要是应用Python，然后LSTM算法做股票行情的时间序列分析，SVM算法做新闻的文本情感分析。
- it is mainly based on Python, then LSTM algorithm to do the stock market time series analysis, SVM algorithm to do the news text emotional analysis.

后端框架

rear-end

- 后端主要利用Spring Boot搭建web端的后端，同时利用Mybatis连接数据库和Spring Boot
- rear-end mainly use Spring Boot to build web-based rearend, while using Mybatis to connect to the database and Spring Boot

前端

front-end

- 前端部分是利用现成的HTML5模版修改，利用Angular.js与后端交互
- Front-end part is the use some HTML5 template and just modify it, the use of Angular.js and back-end interaction

**ppt11**

整个用户的使用流程如本图所示

用户使用我们的平台前，首先需要登录。登录之后可以查看（4大板块）的信息，同时能够执行添加自选股的操作。用户也可以查看针对自己推荐的个性化新闻，以及对某只股票的分析、预测

The entire workflow from the end-users' perspective shown in this figure

Before using our platform, users first need to log in. After logging in you can view the information (4 large plates) and at the same time be able to perform the operation of adding a self stock. Users can also view personalized news for their own recommendations, as well as a stock analysis, and see the prediction of the stock.

**ppt12**

最后一个部分是我们小组的计划安排和团队协作工具

The last part is our team's scheduling and teamwork tools

**ppt13**

我们的项目计划可以分为如下的7个部分，（ppt上面念一遍）。我们当前已经实现了的部分是1，2两点，现在正在3、4两点同时进行，计划在12-13周左右完成整个项目

Our project plan can be divided into the following seven sections, (ppt read above). The parts that we have achieved at present are 1, 2 and 2, and we are working on them at the same time. We plan to complete the entire project in about 12-13 weeks

**ppt14**

人员分工

Division of labor

**ppt15**

针对我们的这个多人开发项目，结合我们在软件工程课程上学习到的知识，我们尝试将敏捷开发的思想融入到我们的项目开发过程中。因此我们会在项目中使用如下的一些团队协作工具

Because it is multi-person development project, combined with our knowledge of software engineering courses, we are trying to incorporate the idea of Agile software development into our project development. So we will use some of the teamwork tools in the project

Github

- 我们会利用Github作为我们的项目仓库，管理我们的代码、文档
- We will use Github as our project repository, managing our code and documentation

leangoo

- 这是一款面向于敏捷开发的项目协作工具，完美支持Scrum敏捷开发和看板方法，通过Leangoo看板可以轻松进行敏捷需求管理和任务跟踪。我们团队可以进行可视化、实时的任务协作。
- This is a project collaboration tool for Agile software development. It support perfectly for Scrum agile development and kanban methods, and easy-to-use Agile requirements management and task tracking with Leangoo Kanban. Our team can conduct visual, real-time task collaboration.

Travis CI

- 它提供了Github项目上的项目的持续集成服务。对于持续集成、持续测试、持续部署这些内容，我们并不是十分明白，所以我们想尝试在项目中加入这些元素，能够借此机会学习相关的知识。
- It provides continuous integration of projects on Github projects. We are not fully aware of the implications of continuous integration, continuous testing, and continuous deployment, so we want to try to include these elements in the project to take the opportunity to learn the relevant knowledge.