



基于Intel Edison和Node.js的 智能台灯的设计与实现



数字媒体技术43班 13004330

指导老师

吴伟敏

答辩人

袁鹏飞

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选题意义

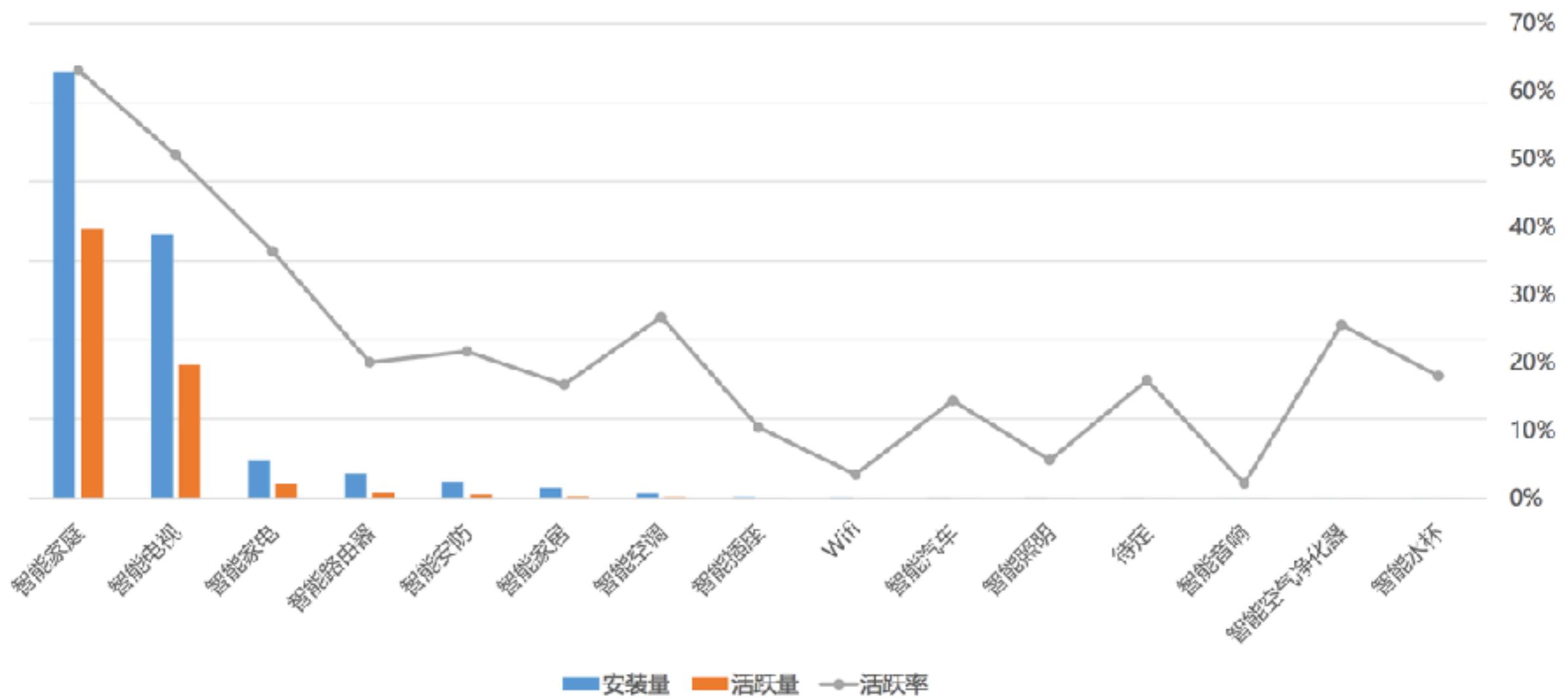
8.7亿

移动互联网用户规模



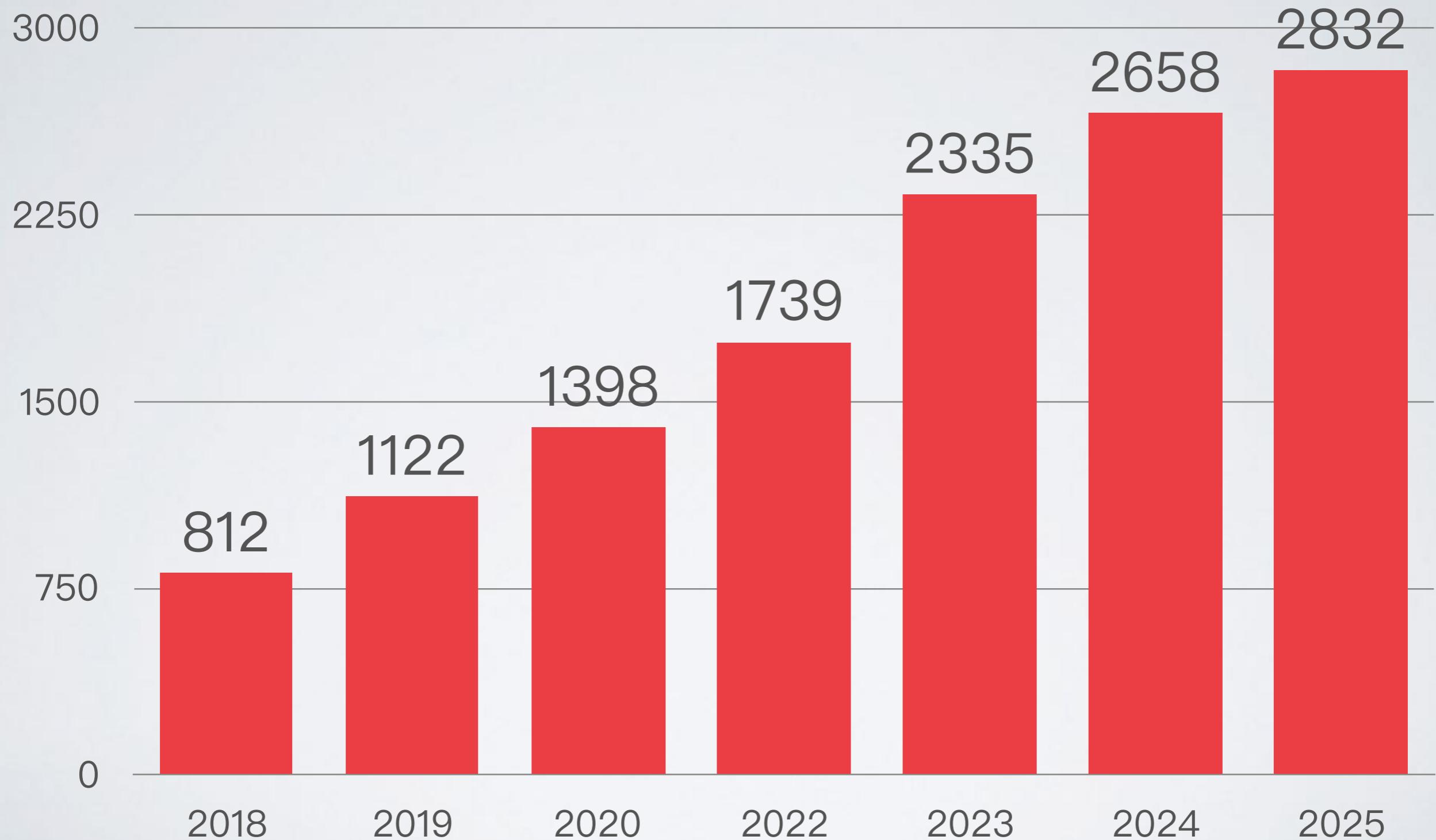
小于一千万
智能家电用户

6.6%移动互联网渗透率，智能家居应用伴随智能制造/工业互联网产业，具高市场成长潜力。



数据来源:TalkingData 移动数据研究中心 • 数据截止2017年2月

智能家电家庭数量预测 (百万)



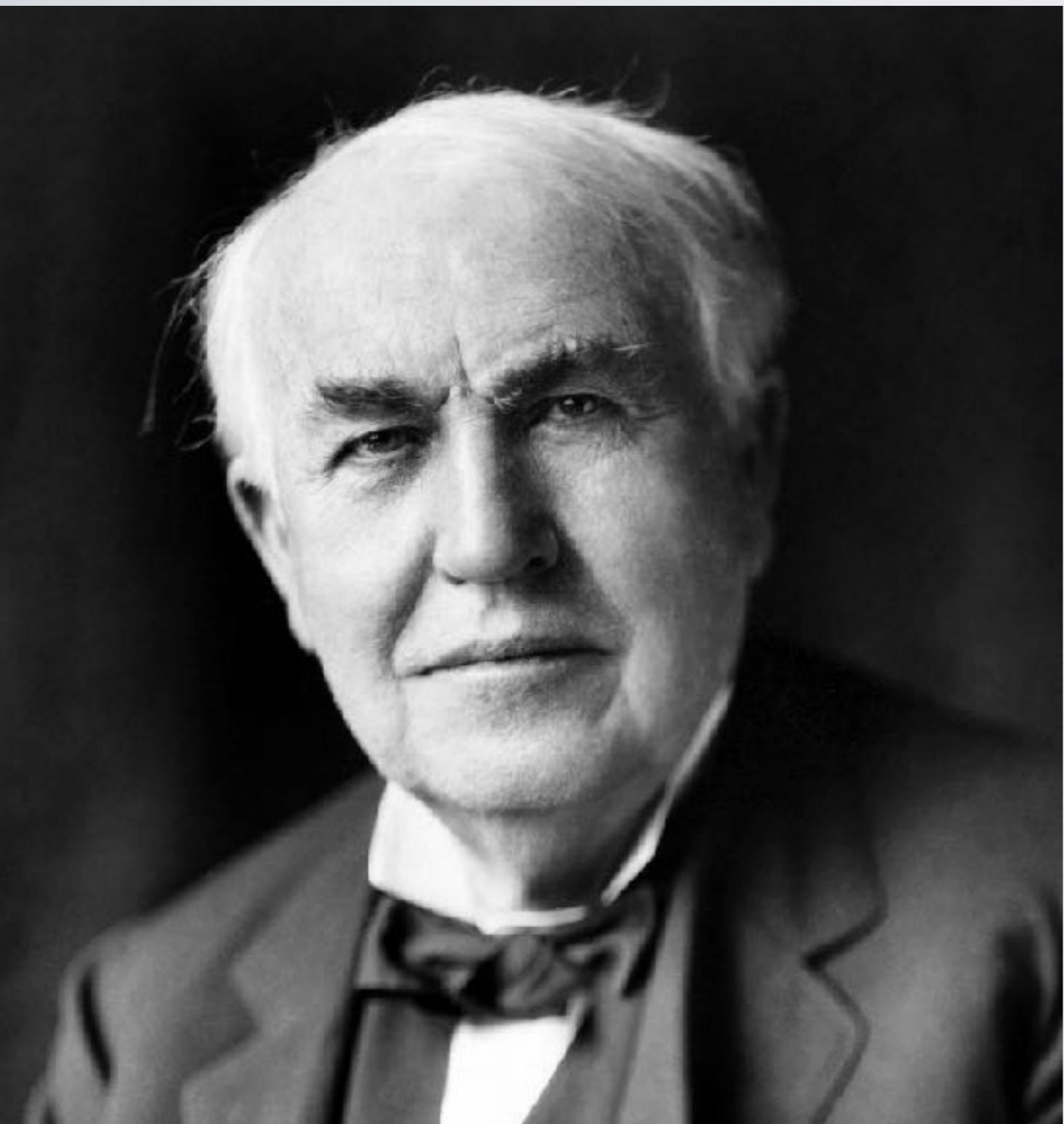
硬件部分

Hardware



| | | |
|--|---------------|--|
| | Item Name | SMD5730 LM571A |
| | Lumens(LM) | 50-60LM |
| | CCT(K) | 2800-3500K 4000-4500K 6000-6500K |
| | Voltage(V) | 3.0-3.6V |
| | Current(mA) | 150ma |
| | CRI(Ra) | >80Ra |
| | Legs Quantity | 2pins |





Thomas Edison

1879年

历经无数次艰难试验
人类终于拥有了可靠的电灯
从此
我们走向了伟大的电气时代





经典设计 X 亮度、色温无级调控
一键专注 X 智能唤醒



软件部分

Software



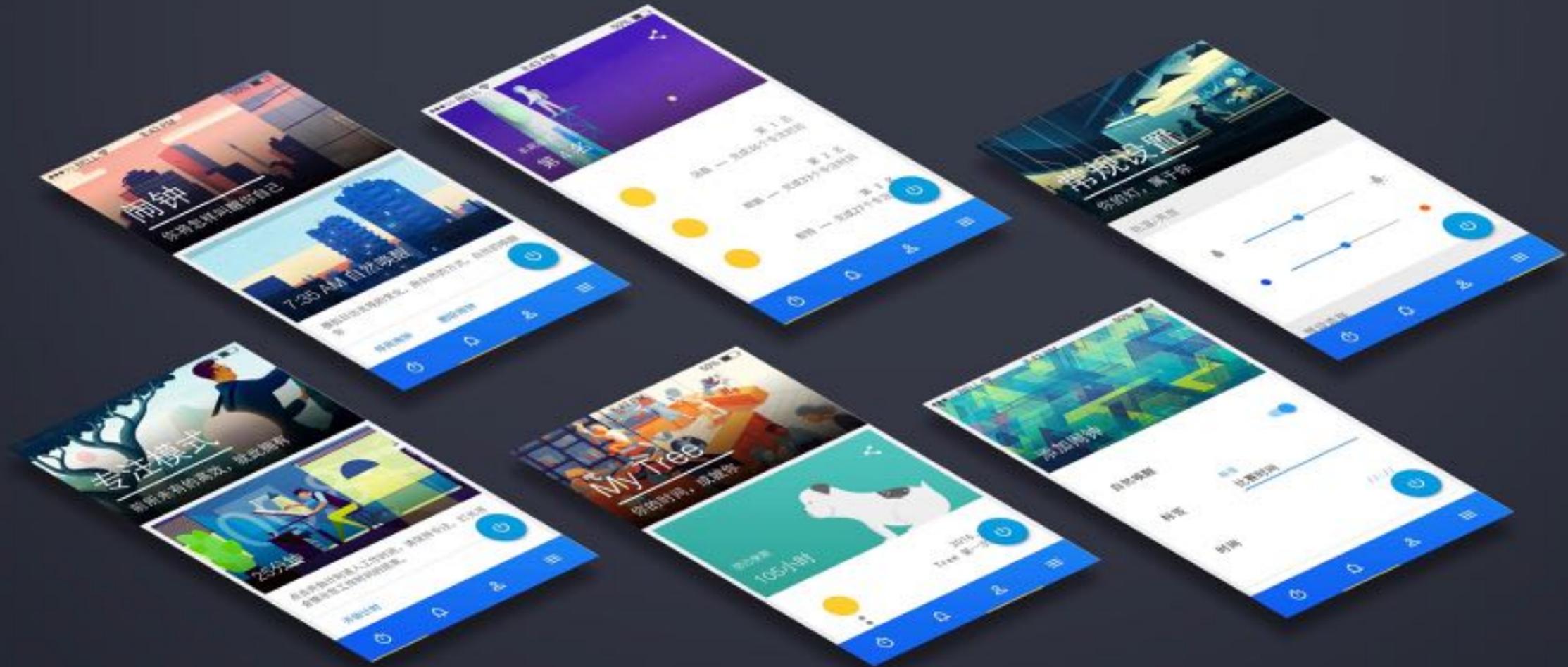
The image shows the Intel XDK IDE interface with a large, semi-transparent watermark of the letters "No" and "OK" centered over the workspace. The "No" watermark is on the left, and the "OK" watermark is on the right.

The Intel XDK interface includes:

- PROJECTS** tab: Shows a project named "weather".
- DEVELOP** tab: Active tab.
- Working Files** sidebar:
 - main.js
 - myscripts.js
 - index.html
- File**, **Edit**, **Find**, **View**, **Navigate**, **Help** menu bar.
- main.js** code editor:

```
1 var mraa = require('mraa');
2 var fs = require('fs');
3 console.log('MRAA Version: ' + mraa.getVersion());
4
5 var express = require('express');
6 var app = express();
7 var path = require('path');
8 var http = require('http').Server(app);
9 var io = require('socket.io')(http);
10
11 var pwm3 = new mraa.Pwm(3);
12 var pwm9 = new mraa.Pwm(9);
13 pwm3.enable(true);
14 pwm9.enable(true);
15
16 var Pos = new mraa.Gpio(2);
17 var Neg = new mraa.Gpio(4);
18 var Pos2 = new mraa.Gpio(8);
19 var Neg2 = new mraa.Gpio(12);
20 var Switch = new mraa.Gpio(13);
21
22
23 var cold = 0;
```
- Line** and **Column** indicators at the bottom of the code editor.
- JavaScript** language selector.
- Spaces: 4** indentation setting.
- IoT Device**: Set to "edison (192.168.43.122:9080)".
- Intel XDK IoT**, **SSH Terminal**, **Serial Terminal** buttons.
- Output** terminal:

```
MRAA Version: v1.5.1
Web server Active listening on *:3000
```



界 面

专注模式



- 简单易行的时间管理方法
- 每工作25分钟，将提示用户休息5分钟
- 好友排名，让努力成为一种乐趣

闹钟

- 自然唤醒

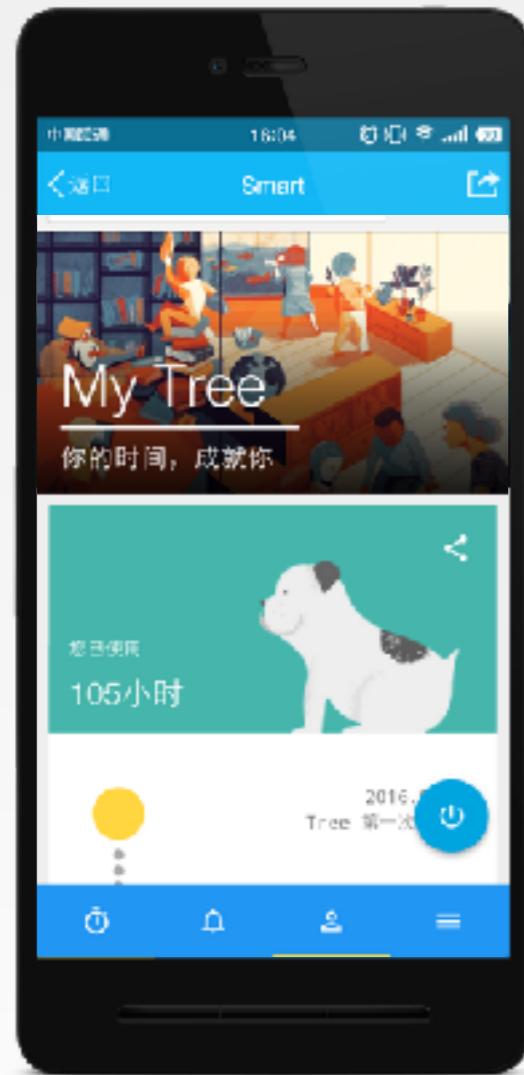
模拟日出光线的变化，用自然的方式
自然的唤醒你



- 日常提醒

灯，等灯！等灯！

My Tree



- 用户成长记录

在这里，用户可以看见他的第一次开灯

第一次开启专注模式

第一次拯救了一棵树木

- 一键分享

一键分享至QQ空间与QQ好友

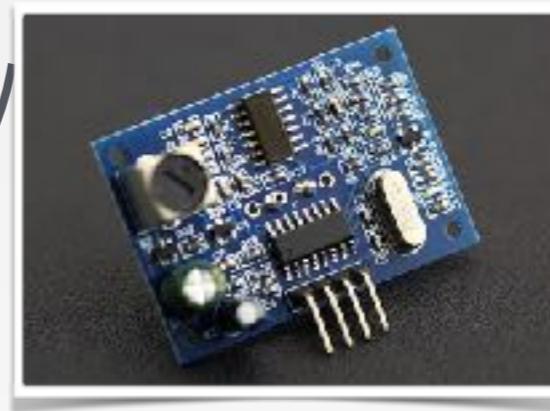
与好友一起分享“成长”的乐趣

更多设置



- 用户无极自定义光亮、色温
 - 多种模式预设，契合多种情况
- 阅读模式：**温和色温，适于阅读与写作
- 自然光模式：**高显色性
- 儿童模式：**去蓝光，无频闪

展望



A wide-angle photograph of a dense forest. The foreground is filled with the dark green, conical shapes of evergreen trees. Above them, a thick layer of light-colored fog or mist hangs in the air, obscuring the tops of the trees and creating a sense of depth. The overall atmosphere is hazy and serene.

Thanks

The background of the image is a photograph of a lush green forest. In the distance, there are dark, silhouetted mountain peaks partially obscured by a thick layer of fog or mist. The overall atmosphere is serene and slightly hazy.

请各位老师指正