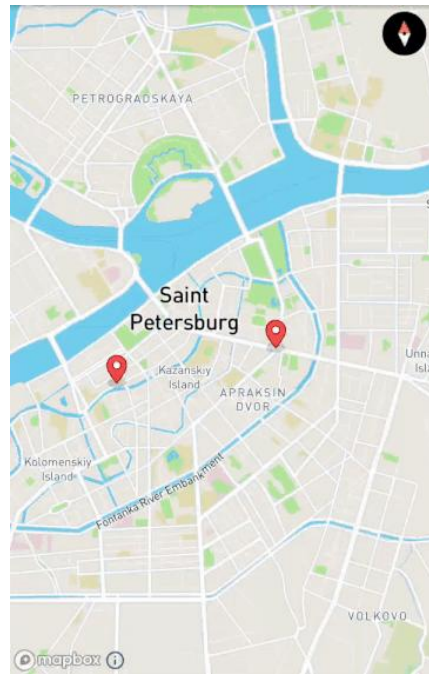
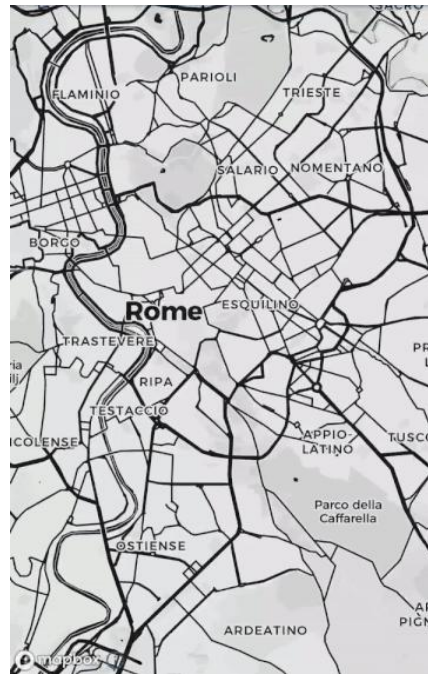
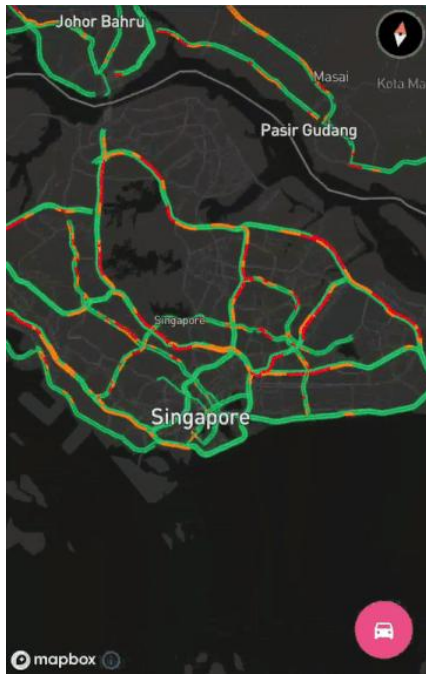


Delivering accurate maps to Chinese Android users 为中国安卓用户提供准确的地图服务



- Work at Mapbox includes: Android apps, demos, starter kits, documentation, support, syncing Android team with other departments, etc.

工作包括：安卓app、演示、初学者工具包、客户服务、等

- Lived in Beijing from 2011-2015
2011到2015，我住在北京！

Today's talk:

简报主题:

Today's talk:

简报主题:

1. Design

地图设计决策

Today's talk:

简报主题:

1. Design

地图设计决策

1. Location data

位置数据服务

Today's talk:

简报主题:

1. Design

地图设计决策

1. Location data

位置数据服务

1. How to create an app with Mapbox

通过Mapbox，怎么开发一个安卓应用？

Design decisions

地图设计决策

Does the map
have too much
information? Too
little? Wrong
type of
information?

太多信息?
太少?



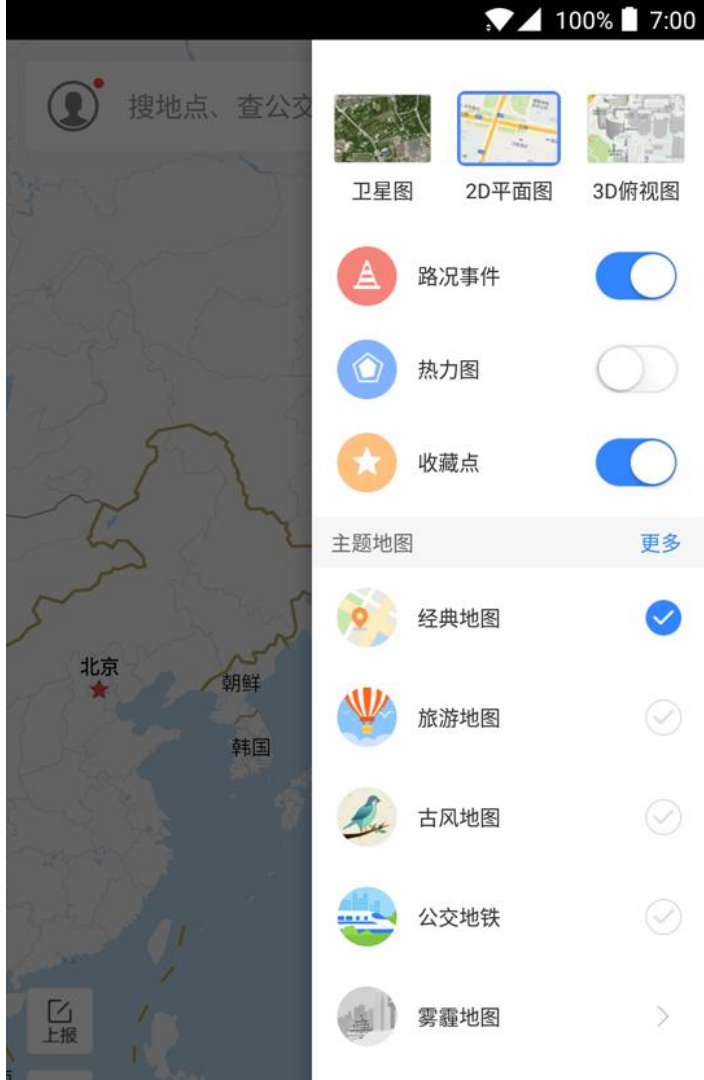
Correct zoom level for a hotel?

酒店的位置:正确的缩放级别?



Right layers and
information? Correct
UI/UX?

你要给用户什么
选择?



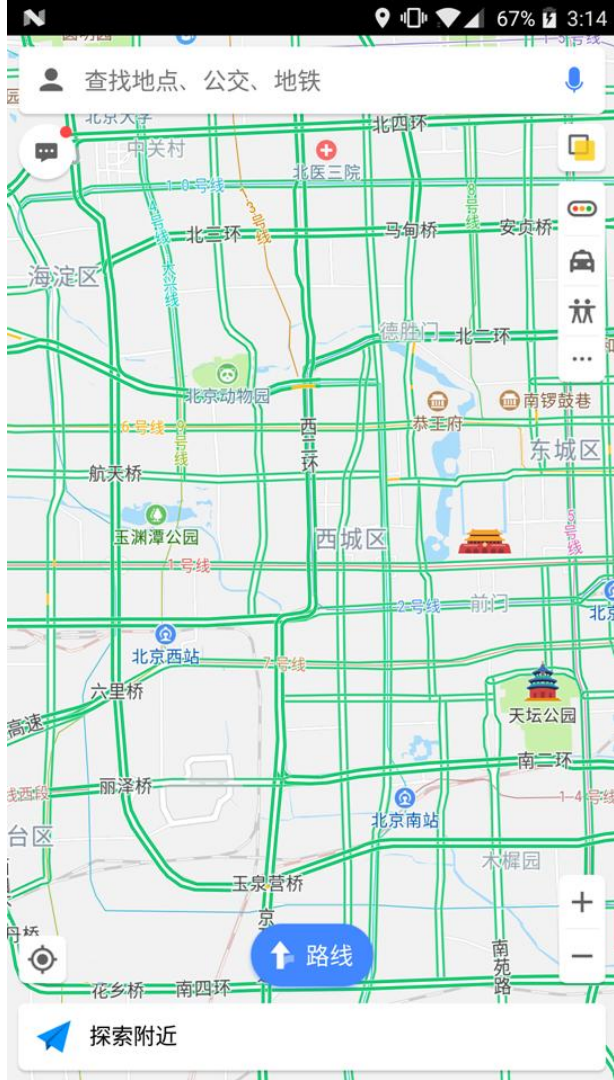
App user has 13 choices including the map. Right amount of options? Right type?

应用用户有十三个选择。适量选择吗？说不定...



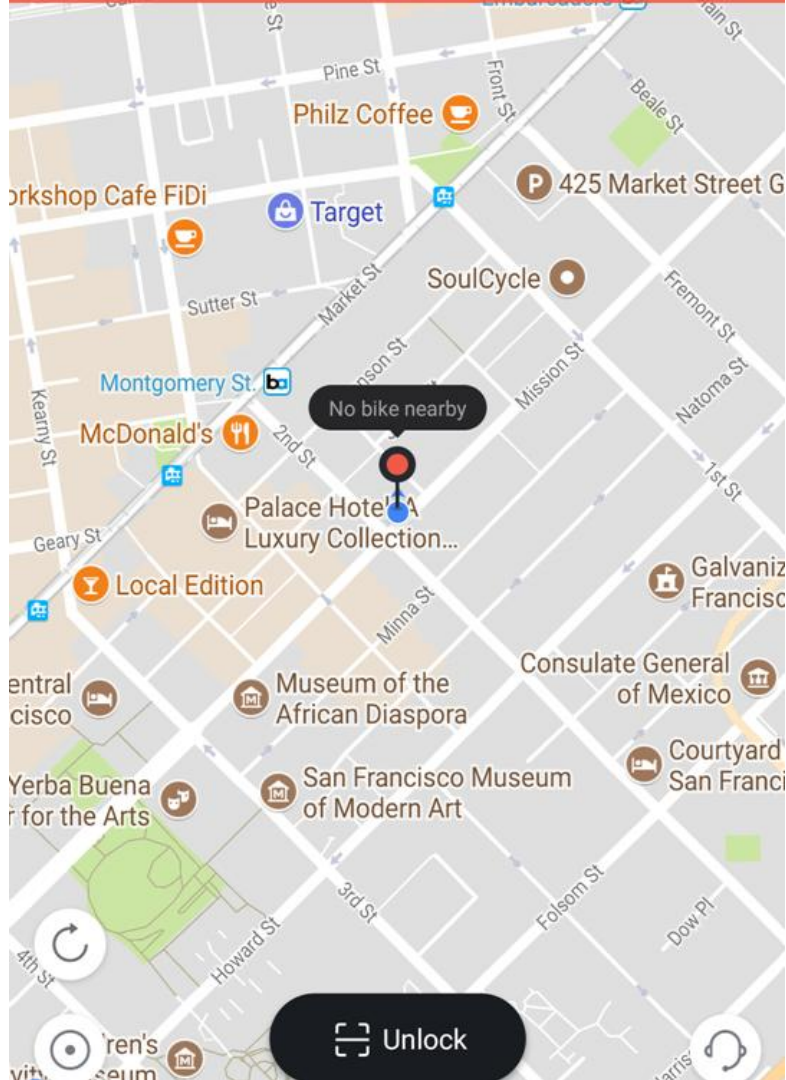
App user has 16 choices including the map(!)

十六个选择(!)



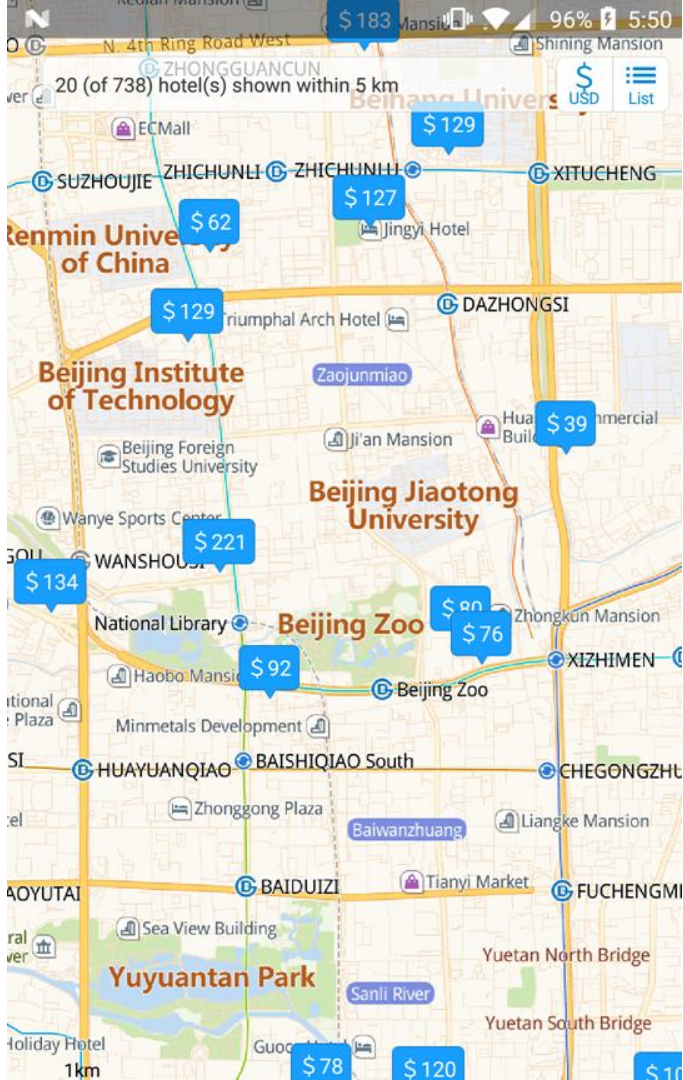
Right info displayed for a bicyclist?

骑自行车的人需要看什么信息？



What's important here?
Schools? Hotel prices?
Subway stations?

什么是重要的？大学的
位置？酒店的价格
？每一个地铁站？



Don't show subway lines
if in driving mode?
Buildings

如果开车的话，
不用看地铁线？
不用看每一个大
楼？



Marker clustering
标记群集



Static image decision (markers, camera position, etc.)

静止的地图决策（标 记、视角位置、等）

详情

单价: 40449元/m² 发布: 17.09.27
楼层: 中层(共9层) 朝向: 南北
类型: 普通住宅 装修: 精装修
年代: 2011年 产权: 70年商品房

小区: 领秀慧谷A区(三区) >

昌平-沙河
距昌平线生命科学园站998米

展示更多

房源描述

核心卖点
领秀慧谷南北通透小区环境优美得放率高带电梯适合居住
税费: 满二年只要契税超低税马上满五唯一
户型: 户型格局方正南北通透入住
交通便利: 紧邻地铁8号线

潘世豪
15321973406

微信 电话



What's the difference?
有什么区别？



Navigation

导航→





Daily life

日常生活→





新景家园东区



基础信息

小区品质

周边配套

楼栋户型

热门点评

小区位于东城区崇文门商圈内。小区东侧为南花市大街，南侧为广渠门内大街，西侧为崇文门外大街，北侧为西花市大街，距离...

物业公司: 北京新世
 物业电话: 010-871
 物业费: 1.14~2.48
 供暖类型: 集中供暖

周边配套

交通

医疗

生活

休闲

门店



小区附近就有三甲医院首都医科大学附属北京同仁医院。由于平时就诊的病患较多，医院增设了微信挂号预约平台，但是挂号仍不太容易，也可电话预约挂号。医院特色科室为眼科，耳鼻喉科划分也很细致。



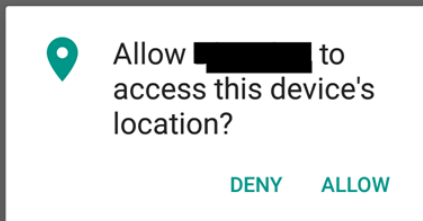
关注

我是业主

咨询经纪人

Asking for permissions


位置权限



大家正在搜：头顶40公斤水泥墩 减肥60斤

- #手机导购玩嘻哈#
- #十九大#
- #疯狂种草季#
- 热门/超级话题

Video News Ranking list 同城



Enable location service

Discover people around and something new

Enable




大董 (金宝汇店)

60分钟 | 起送¥20 | 配送¥6

折扣商品8折起

菜单 外卖点评 商家详情



距离太远，外卖送不到哦

收货地址：null

[查看周边外卖](#)

换个收货地址
返回

折扣

新品上

热销

招牌

冷菜

热菜

主食

甜品

饮品

三鲜饺子(大量海参,虾仁,鲜猪肉) 月售3 ~~¥99~~ ¥79.2 8折 限1份

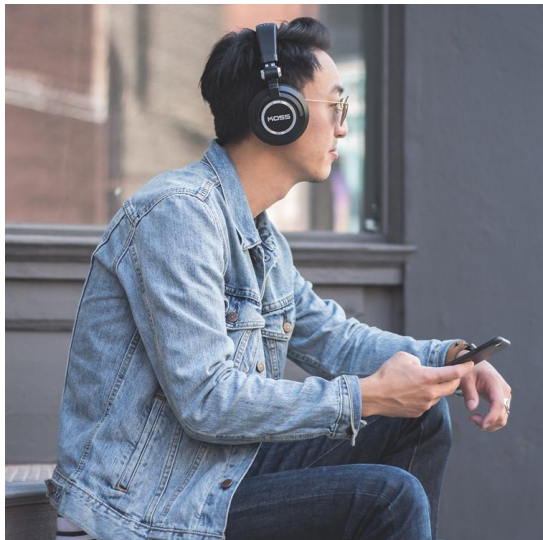
三鲜饺子20个。

¥0 另需6元配送费

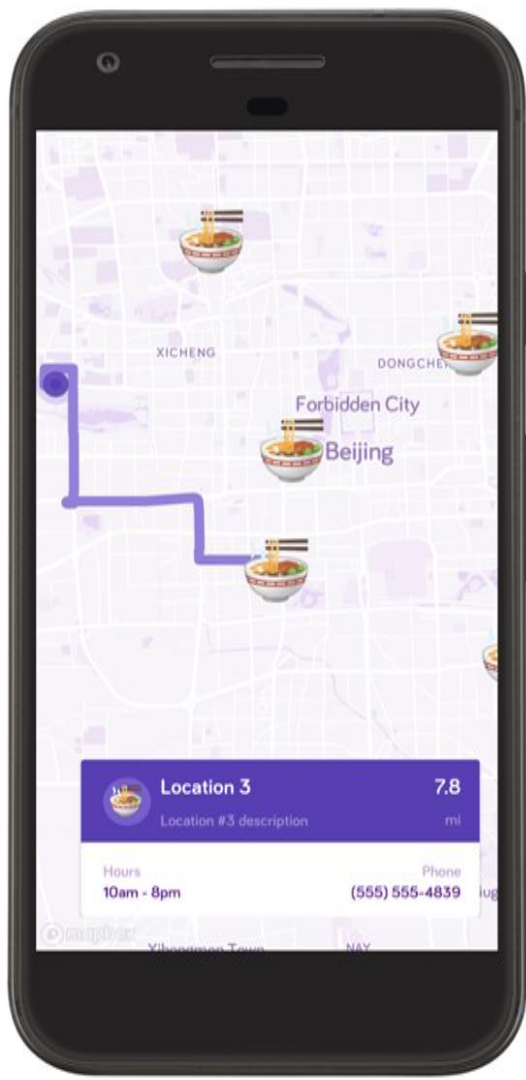
还差¥20起送

Location data + context

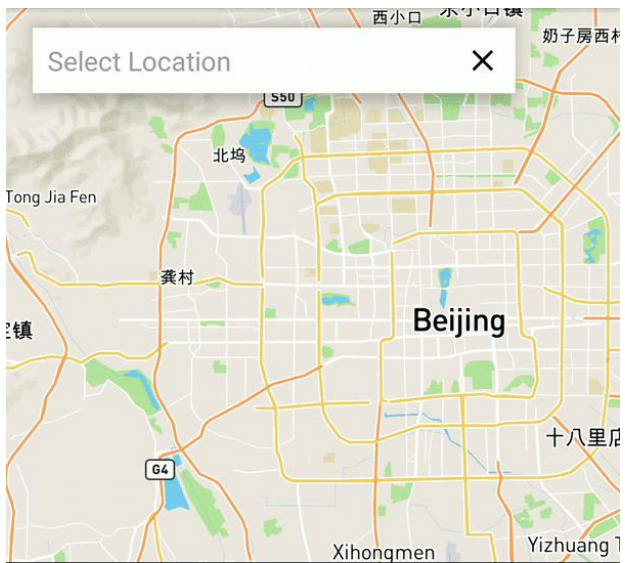
位置数据服务



导航



位置搜索 (地理编码)



Label	Name	ThePhone	Company	GPS Data Team
2ndLocal	Norpoi	TheUSAExplorer	Church Base	Hoffrig
411 dot info	Omision	ThumbJack	C. S.M.	IndexPages
9dot	Pakrakis	SonTon	CyloPages	Jayde
31widirectory	Panaseano	TonTon	Cylix	Judy's Book
40Mdirectory	Patin	Tapiis	SearchEngineal	JYSI Club Local
Amfiis	PE	Tapiis	SearchyM	Kalpis
Amfey	PhotoBucket	Tapis	Demo	Local
Angelnet	Pimia	US Yellow Pages	Discover car Tires	Local Pages
990	Pindress	WaterFront	Dental	Locations
21mvsd.com	PunchBox!	WebWorkIndex	ElectronicPages	LoCarin
ang	Rate it All	Where2Go	ElitesDirectory	LookDoh
81 Hay	Rediretory	Where2T	ErnzBusiness	Magichello
81 Sheet	Reitak	WOWCity	Exportek	Marta
80420	Rein	Yahoo Local	Express Update	NLD
81owbook	Rein	Yahoo	Local	Minib
8awesseek	SearchTheNet!	Yahoo	Local	MerchantCircle
Car Makers [12]	ServiceMagic	Yahoo	Find It Now	MilitaryVehicle
Check My Reviews	ServiceLocal	YahooBot	Flora	MoPages
Cipnet	SwagTops	YahooKwiz	ForSaleNow	MyHobby
Clydes	SwanAOity	YahooPageCity	FourSquare	MySpace
CitySquares	SoMuch	YahooUSA	Flire	MyWebBelow
Classifieds 1000	SuperMedia	YahooVid	Games	NetRack
Clicky	SynergyDirectory	Yip	GetPaw	NetPort
		Yip	GetProoking	NotAPlace Place

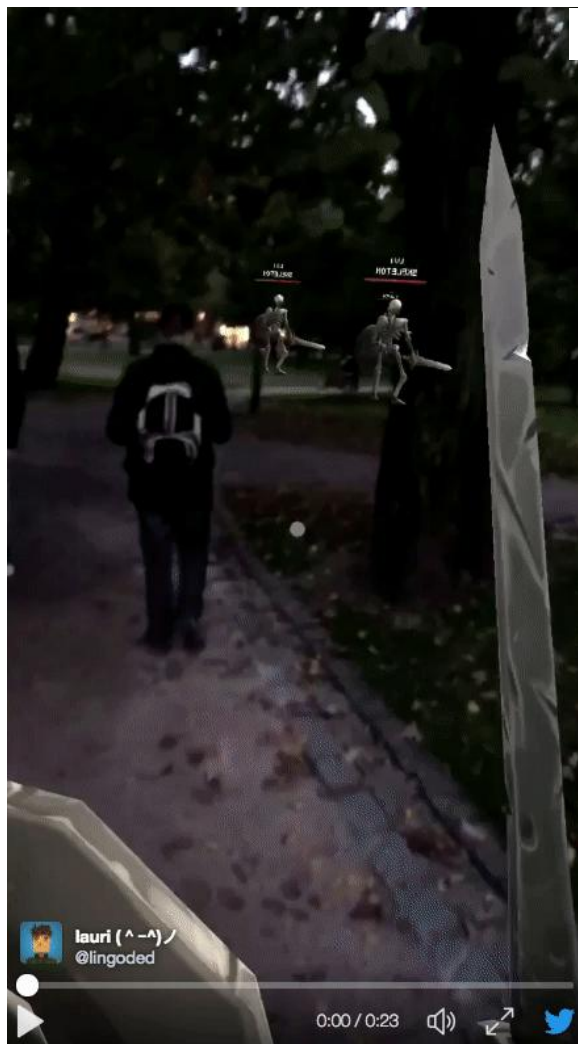
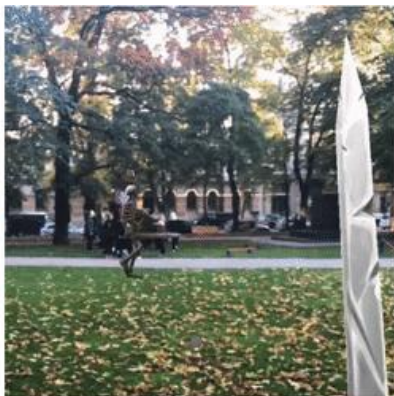
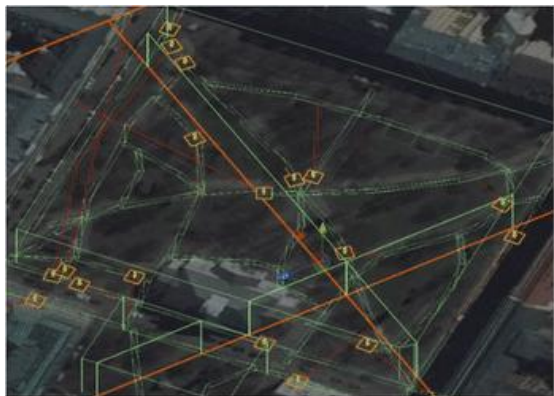




智能手表

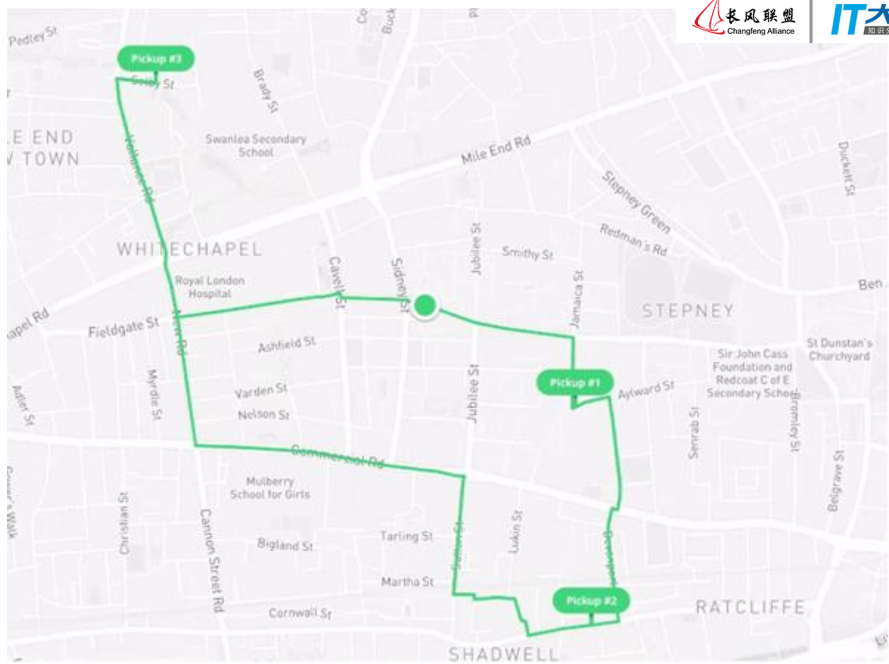


AR (增强现实) 游戏



物流

The screenshot shows a Taobao.com product page for a jacket. The main product is a green and black jacket with a white graphic on the front. The price is ¥78.00. The page includes a search bar, navigation tabs, and a detailed product description with images and specifications. The bottom of the page shows the Taobao.com logo and navigation links.



社交媒体



Location



Settings



Discovery Settings

Distance

13km



Age

25 - 33



Show Me

Only Women

App Settings



Personal Information

Name, gender, birthday



Privacy & Permission

Contacts, my album and moments settings



Notification & Chat

Chat and notification settings



Data & Storage



Tantan



There is no one new around you...



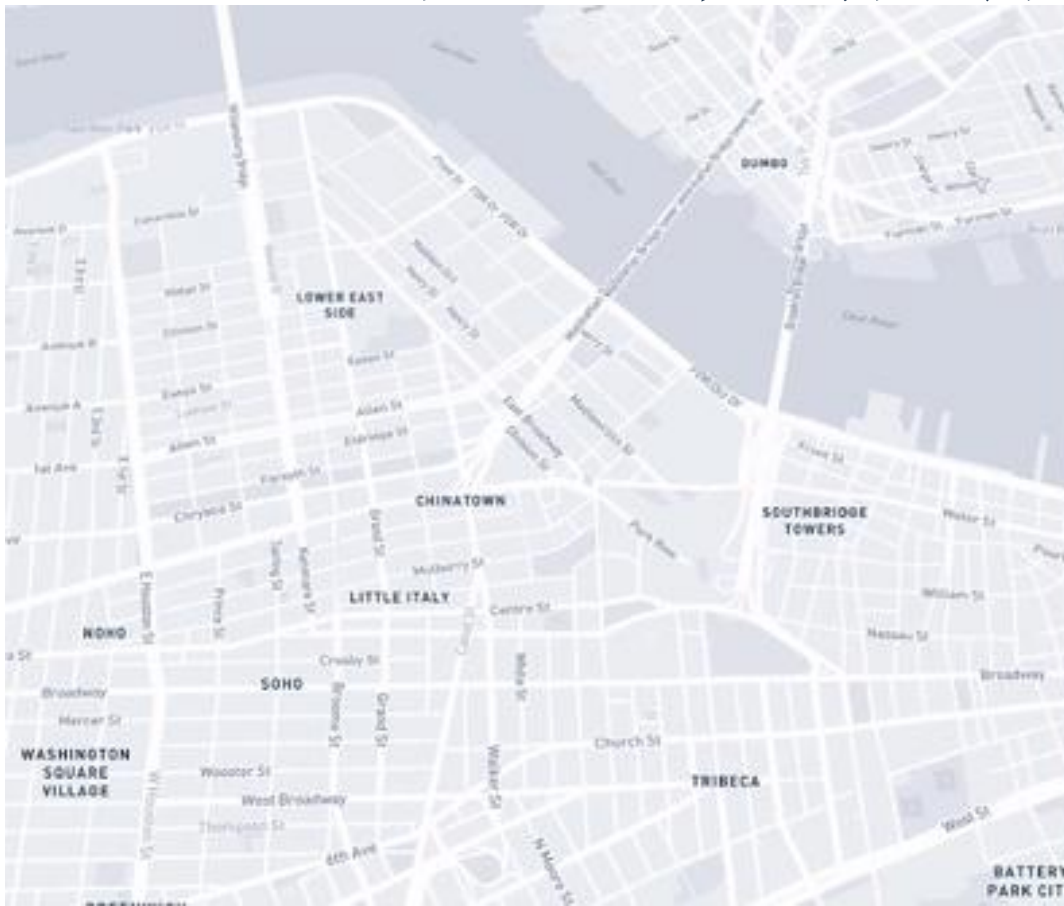
INVITE YOUR FRIENDS



- Location data platform for developers
开发者而建的地图平台

- Location data platform for developers
开发者而建的地图平台
 - Maps 地图

矢量瓦片 + 动画游戏技术



不同于传统的栅格地图
Mapbox采用矢量地图

- Location data platform for developers

开发者而建的地图平台

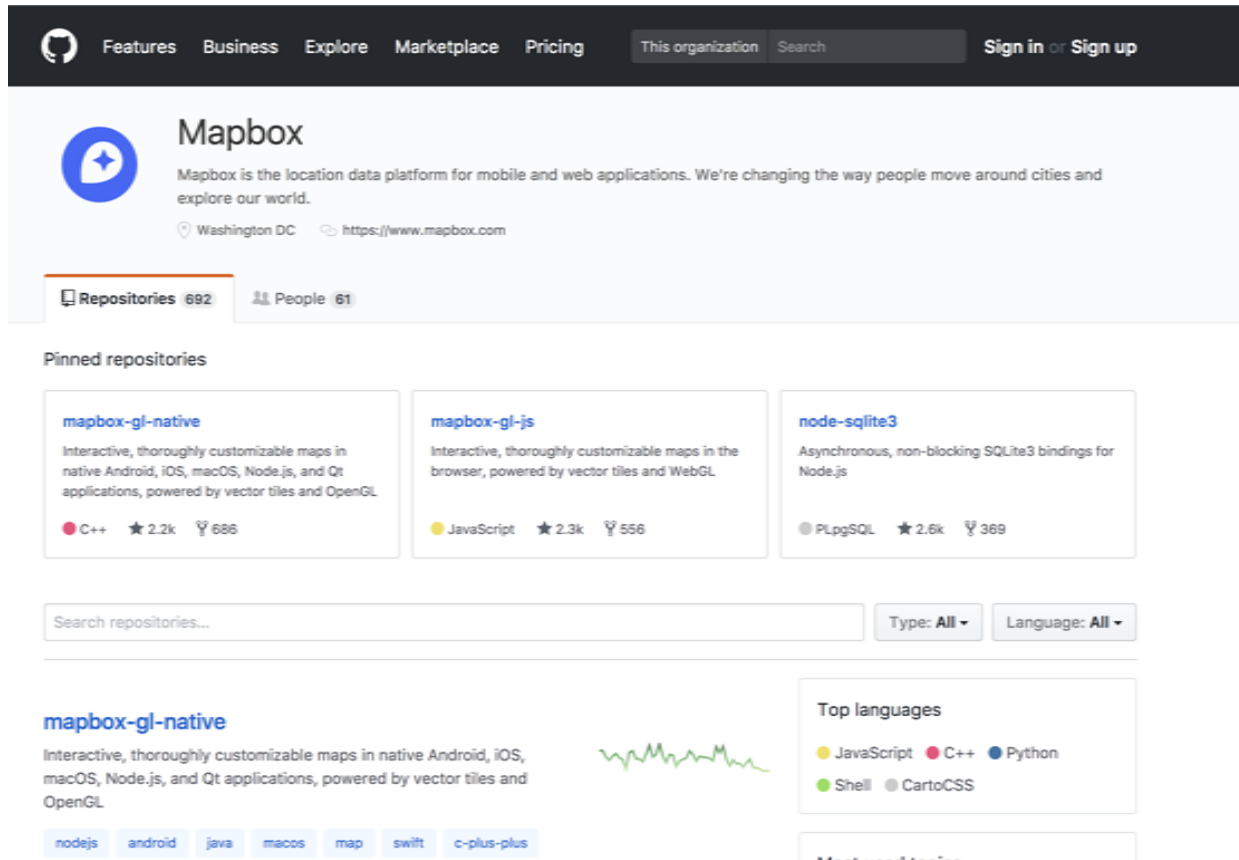
- Maps 地图
- Location search 位置搜索 (地理编码)

- Location data platform for developers

开发者而建的地图平台

- Maps 地图
- Location search 位置搜索 (地理编码)
- Navigation (driving, walking, biking) 导航 (开车、走路、骑车)

Open-source tools (700 public Github repos) 开源的安卓产品



The screenshot shows the GitHub profile for the Mapbox organization. At the top, there are navigation links for Features, Business, Explore, Marketplace, and Pricing. The organization's name, Mapbox, is prominently displayed with its logo. Below the name, a brief description states: "Mapbox is the location data platform for mobile and web applications. We're changing the way people move around cities and explore our world." The location is listed as Washington DC, and the website URL is https://www.mapbox.com.

Key statistics are shown: 692 Repositories and 61 People. Under the "Pinned repositories" section, three repositories are featured:

- mapbox-gl-native**: Interactive, thoroughly customizable maps in native Android, iOS, macOS, Node.js, and Qt applications, powered by vector tiles and OpenGL. It has 2.2k stars and 686 forks.
- mapbox-gl-js**: Interactive, thoroughly customizable maps in the browser, powered by vector tiles and WebGL. It has 2.3k stars and 556 forks.
- node-sqlite3**: Asynchronous, non-blocking SQLite3 bindings for Node.js. It has 2.6k stars and 369 forks.

A search bar for repositories is present, along with filters for Type (All) and Language (All). A detailed view of the **mapbox-gl-native** repository is shown at the bottom, including its description and a list of supported platforms: nodejs, android, java, macos, map, swift, and c-plus-plus. A "Top languages" section lists JavaScript, C++, Python, Shell, and CartoCSS.

SDKs for Android, iOS, Unity, Qt (for cars), & React Native

软件开发包: 安卓、苹果公司、Unity、Qt (一种汽车平台)、& React Native.

The Mapbox GL ecosystem

This repository hosts the cross-platform Mapbox GL Native library, plus convenient SDKs for several platforms. The cross-platform library comes with a [GLFW](#)-based demo application for Ubuntu Linux and macOS. The SDKs target the usual languages on their respective platforms:

SDK	Languages	Build status
Mapbox GL Native	C++14	
Mapbox Android SDK	Java	
Mapbox iOS SDK	Objective-C or Swift	
Mapbox macOS SDK	Objective-C, Swift, or AppleScript	
node-mapbox-gl-native	Node.js	
Mapbox Qt SDK	C++03	

Additional Mapbox GL Native-based libraries for hybrid applications are developed outside of this repository:

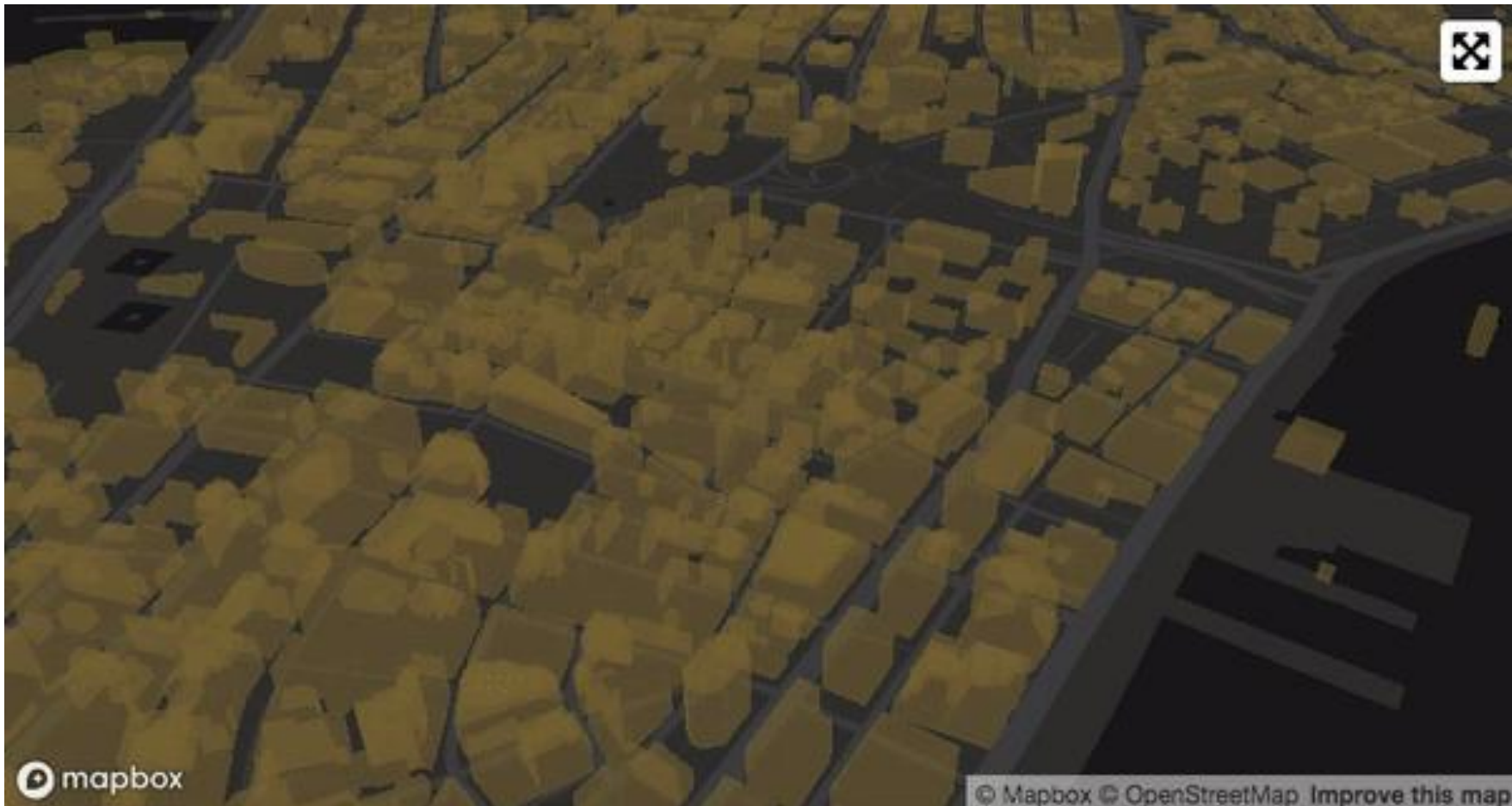
Toolkit	Android	iOS	Developer
React Native (npm)			Mapbox
Apache Cordova (npm)			Telerik
NativeScript (npm)			Telerik
Xamarin			Xamarin

If your platform or hybrid application framework isn't listed here, consider embedding [Mapbox GL JS](#) using the standard Web capabilities on your platform.

Extrusions 三维外形



“Dancing buildings” 三维外形 + 麦克风



AR(Core) 增强现实



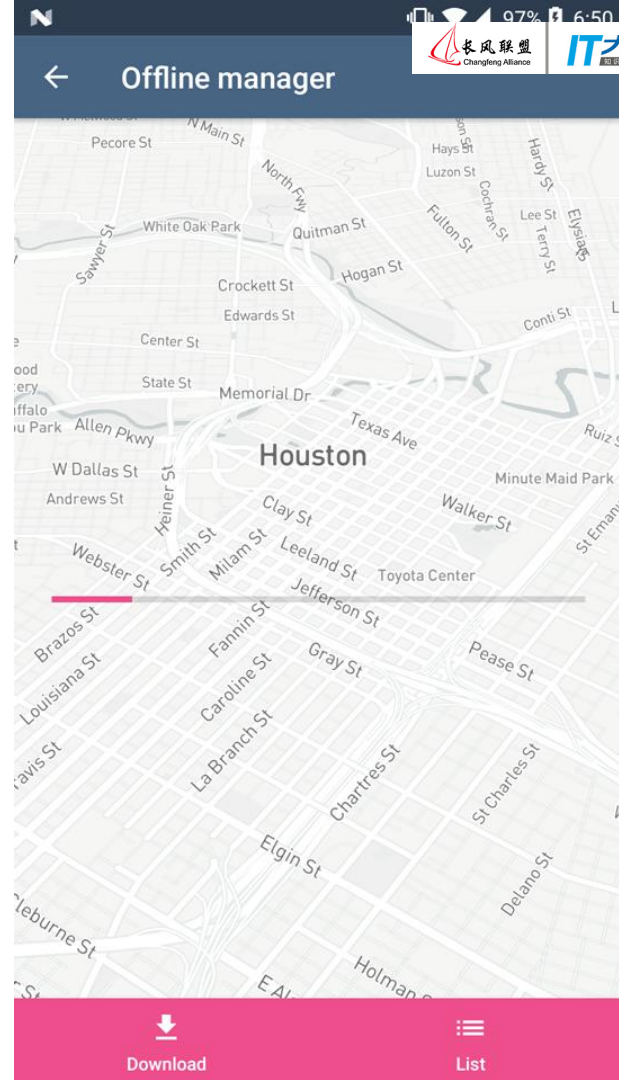
AR(Core) 增强现实



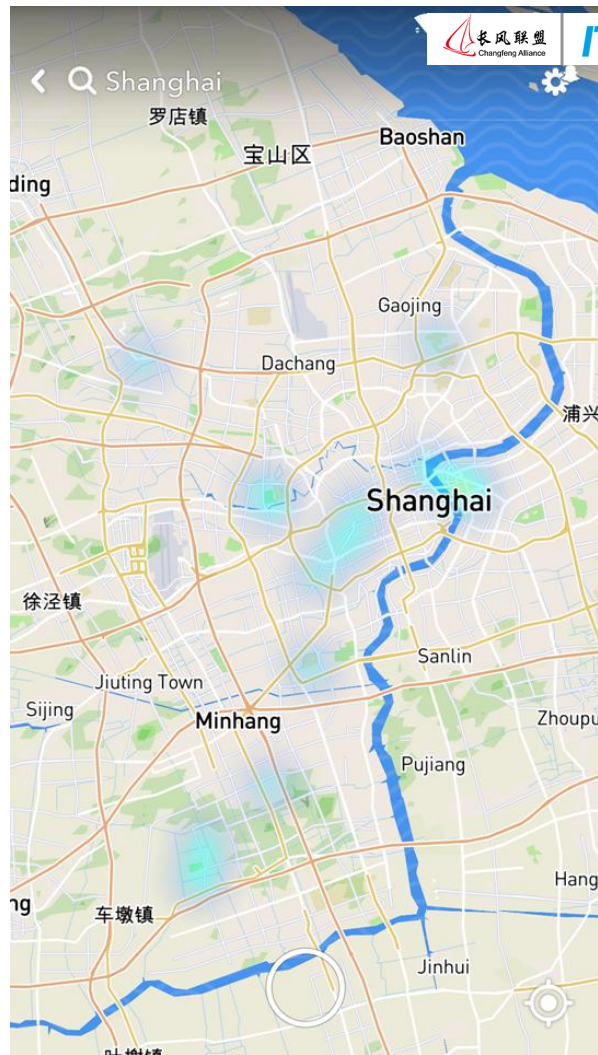
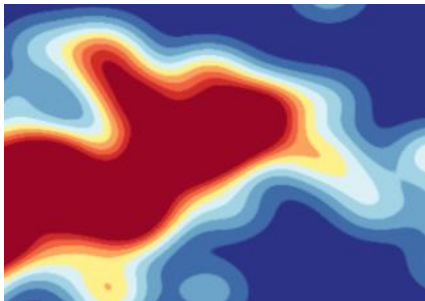
In-app nav 应用里导航



Offline 离线下载



Heatmaps 热点地图

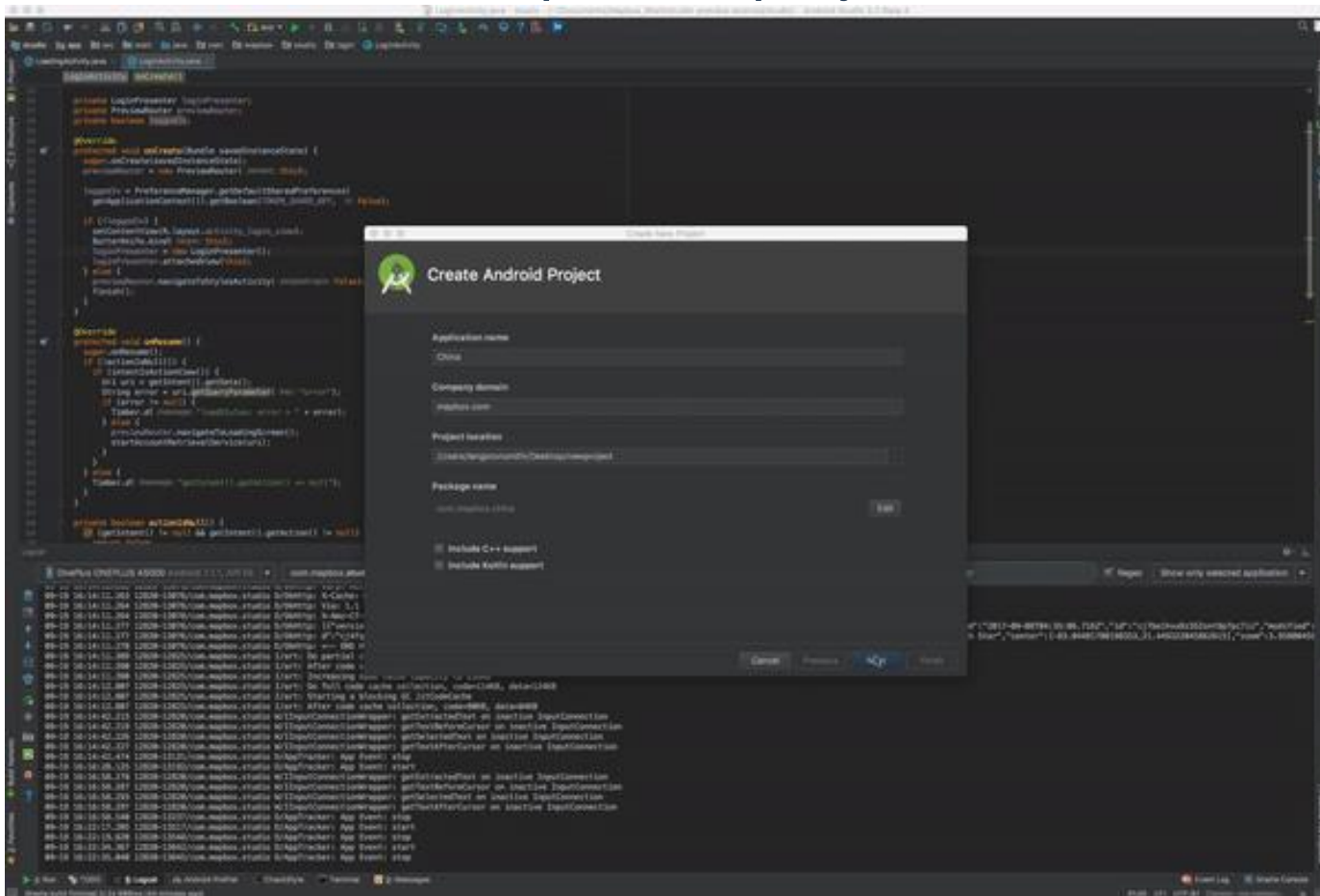


Let's build!

咱们开始！



Set up basic project



App-level build.gradle file

```
dependencies {
```

```
...
```

```
compile('com.mapbox.mapboxsdk:mapbox-android-sdk:5.2.0-beta.4@aar') {  
    transitive = true}
```

```
...
```

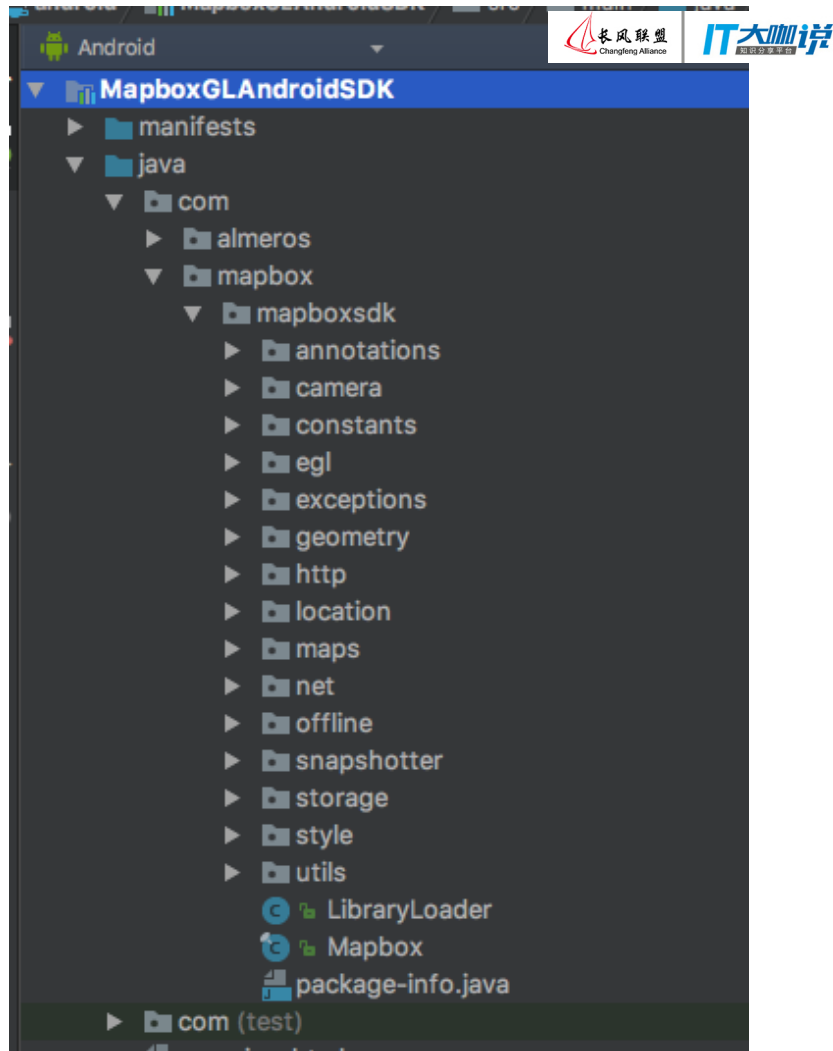
```
}
```

App-level build.gradle file

```
dependencies {
...
compile('com.mapbox.mapboxsdk:mapbox-android-sdk:5.2.0-beta.4@aar') {
    transitive = true}
...
}
```

Maps SDK size 软件开发包大小

- Less than 1MB 可能小于**1MB**
- SDKs final impact is dependent on other app decisions



strings.xml file 字符串的文件

Add your key to the strings file
加你**Mapbox**的访问令牌

```
<resources>
```

```
...
```

```
<string name="access_token">MAPBOX_ACCESS_TOKEN</string>
```

```
...
```

```
</resources>
```

Your first 50,000 mobile users are free!
你前面五万的移动用户是免费的!

XML layout file – XML布局文件

<RelativeLayout

xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:mapbox="http://schemas.android.com/apk/res-auto"

android:layout_width="match_parent"

android:layout_height="match_parent" >

<com.mapbox.mapboxsdk.maps.MapView

android:id="@+id/mapview"

android:layout_width="match_parent"

android:layout_height="match_parent"/>

</RelativeLayout>

Additional map XML attributes – 更多XML属性

```
<com.mapbox.mapboxsdk.maps.MapView
```

```
  android:id="@+id/mapview"
```

```
  android:layout_width="match_parent"
```

```
  android:layout_height="match_parent"
```

```
  mapbox:mapbox_cameraTargetLat="19.948045"
```

```
  mapbox:mapbox_cameraTargetLng="-84.654463"
```

```
  mapbox:mapbox_cameraZoom="3.371717"
```

```
  mapbox:mapbox_cameraTilt="50"
```

```
  mapbox:mapbox_styleUrl="@string/mapbox_style_mapbox_streets"/>
```

More XML attributes – 更多XML属性

github.com/mapbox/mapbox-gl-native/blob/master/platform/android/MapboxGLAndroidSDK/src/main/res/values/attrs.xml

Activity file – Activity文件

```
public class MainActivity extends AppCompatActivity {
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        Mapbox.getInstance(this, getString(R.string.access_token));
```

```
        setContentView(R.layout.activity_main);
```

```
    }
```

```

public class MainActivity extends AppCompatActivity {
    private MapView mapView;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        Mapbox.getInstance(this, getString(R.string.access_token));
        setContentView(R.layout.activity_main);
        mapView = (MapView) findViewById(R.id.runtime_mapview);
        mapView.onCreate(savedInstanceState);
        mapView.getMapAsync(new OnMapReadyCallback() {
            @Override
            public void onMapReady(final MapboxMap mapboxMap) {
                // Customize map with markers, polylines, etc.

            }
        });
    }
}

```


Method overrides 重写此方法

```
@Override
public void onResume() {
    super.onResume();
    mapView.onResume();
}
```

```
@Override
protected void onStart() {
    super.onStart();
    mapView.onStart();
}
```

```
@Override
protected void onStop() {
    super.onStop();
    mapView.onStop();
}
```

```
@Override
public void onPause() {
    super.onPause();
    mapView.onPause();
}
```

```
@Override
public void onLowMemory() {
    super.onLowMemory();
    mapView.onLowMemory();
}
```

```
@Override
protected void onDestroy() {
    super.onDestroy();
    mapView.onDestroy();
}
```

```
@Override
protected void onSaveInstanceState(Bundle outState) {
    super.onSaveInstanceState(outState);
    mapView.onSaveInstanceState(outState);
}
```

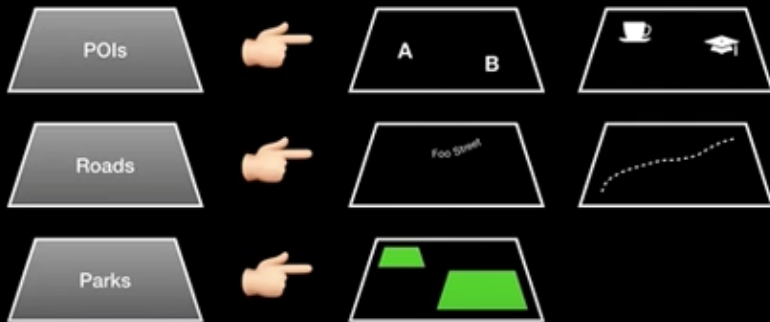
The result!
结果!



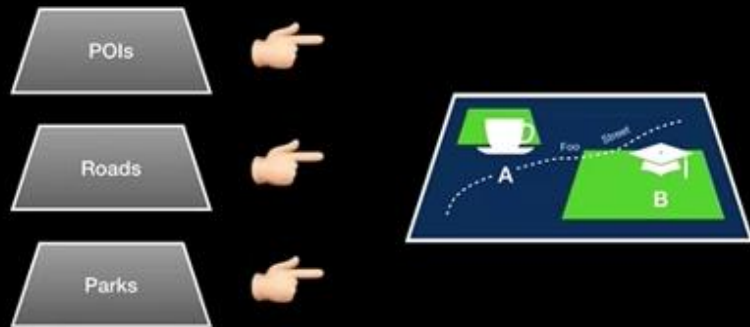
Run-time styling

运行时地图模式

Data Layers 📍 Style Layers



Data Layers 📍 Style Layers





```

mapView.onCreate(savedInstanceState);
mapView.getMapAsync(new OnMapReadyCallback() {
    @Override
    public void onMapReady(final MapboxMap mapboxMap) {

        final Layer waterLayer = mapboxMap.getLayer("water");

    });
}
    
```

```

mapView.onCreate(savedInstanceState);
mapView.getMapAsync(new OnMapReadyCallback() {
    @Override
    public void onMapReady(final MapboxMap mapboxMap) {

        final Layer waterLayer = mapboxMap.getLayer("water");

        findViewById(R.id.floatingActionButton).setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (waterLayer != null) {
                    waterLayer.setProperties(PropertyFactory.fillColor(Color.parseColor("#023689")));
                }
            }
        });
    }
}

```

```

mapView.onCreate(savedInstanceState);
mapView.getMapAsync(new OnMapReadyCallback() {
    @Override
    public void onMapReady(final MapboxMap mapboxMap) {

        final Layer waterLayer = mapboxMap.getLayer("water");

        findViewById(R.id.floatingActionButton).setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (waterLayer != null) {
                    waterLayer.setProperties(PropertyFactory.fillColor(Color.parseColor("#023689")));
                }
            }
        });
    }
}

```

```

findViewById(R.id.floatingActionButton).setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if (waterLayer != null) {
            waterLayer.setProperties(PropertyFactory.fillColor(Color.parseColor("#023689")));
        }

        for (Layer singleMapLayer : mapboxMap.getLayers()) {
            if (singleMapLayer.getId().contains("marine")) {
                singleMapLayer.setProperties(
                    PropertyFactory.textHaloBlur(10f),
                    PropertyFactory.textSize(25f),
                    PropertyFactory.textColor(Color.parseColor("#00FF08")),
                    PropertyFactory.textOpacity(1f));
            }
        }
    }
});

```



```

findViewById(R.id.floatingActionButton).setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if (waterLayer != null) {
            waterLayer.setProperties(PropertyFactory.fillColor(Color.parseColor("#023689")));
        }

        for (Layer singleMapLayer : mapboxMap.getLayers()) {
            if (singleMapLayer.getId().contains("marine")) {
                singleMapLayer.setProperties(
                    PropertyFactory.textHaloBlur(10f),
                    PropertyFactory.textSize(25f),
                    PropertyFactory.textColor(Color.parseColor("#00FF08")),
                    PropertyFactory.textOpacity(1f));
            }
        }
    }
});

```

Retrieving a single map style's layer names

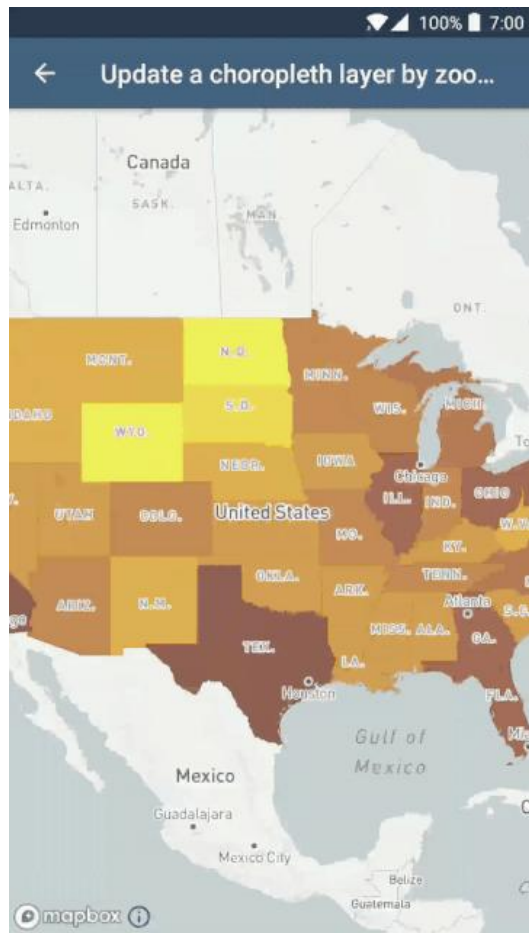
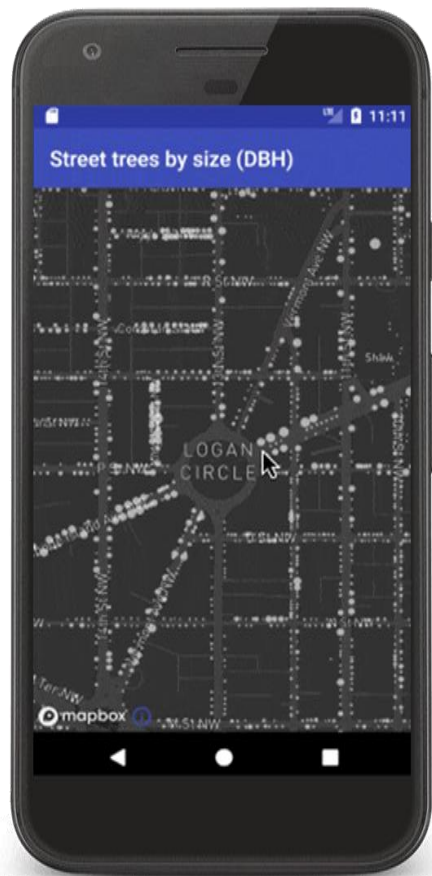
```

mapView.onCreate(savedInstanceState);
mapView.getMapAsync(new OnMapReadyCallback() {
    @Override
    public void onMapReady(final MapboxMap mapboxMap) {

        for (Layer singleMapLayer : mapboxMap.getLayers()) {
            Log.d("MainActivity", "onMapReady: layer name = " + singleMapLayer.getId());
        }

    }
});
}
    
```

Data-driven styling



Some current customers – 现有的客户



Want to learn more?

你想了解更多吗？

mapbox.com/android-docs

中文资料: mapbox.cn/help/first-steps-android-sdk/

&

mapbox.cn/android-sdk

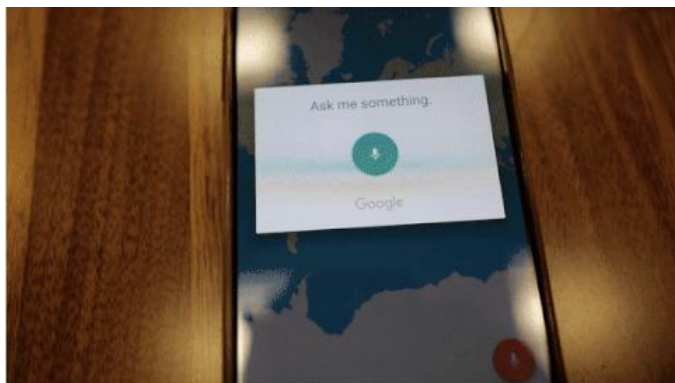
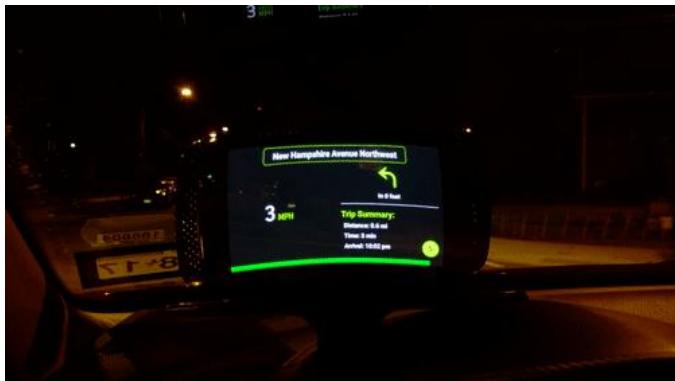
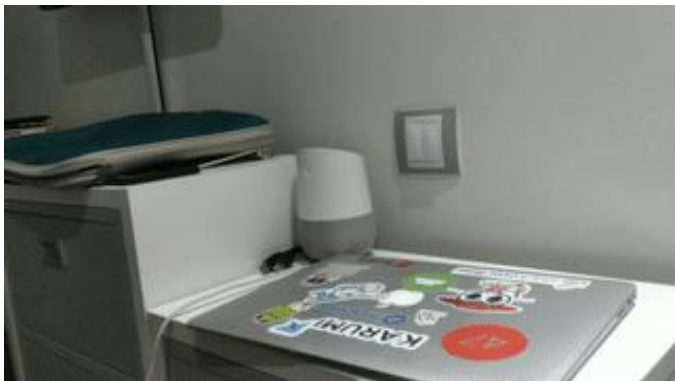


The screenshot shows the Mapbox Android SDK documentation page. At the top, there are navigation links for "Platform" (Android) and "Product" (Map SDK). The main content area features a green header with "Map SDK" and "Current Version: v5.2.0-beta.2". Below this, there are two columns of features: "Live traffic", "Annotations", and "Offline support" on the left; "Runtime styling" and "3D extrusions" on the right. A "Contribute on GitHub" link is also present. The page includes a "Products" dropdown menu with options for "Map SDK", "Plugins", "Mapbox Services", and "Navigation SDK". The "Install the Map SDK" section is visible at the bottom, starting with the text: "Before starting to develop your application with the Map SDK, you'll need to add the SDK as a dependency. You can find the following dependency given below in the MavenCentral repository. While this document shows how to install the SDK through gradle, we also offer a step-by-step walkthrough to help you get started with the SDK." A "Begin installation GUIDE" link is provided for a step-by-step walkthrough.

Blog 博客

blog.mapbox.com

微信公众号: Mapbox



Location + context

最后，位置数据服务是最重要的