

# 基于多智能体协同的高价值信息生成API文档

## 1. 获取两市火车车次数据

Get Cross City Transport

- 请求URL: /cross-city-transport/
- 请求方式: GET application/json
- 请求参数:

参数名	必选	类型	说明
origin_city	是	string	出发城市
destination_city	是	string	目的地城市

- 请求示例:

```
1  "http://localhost:12457/cross-city-transport/?origin_city=广州市
   &destination_city=杭州市"
```

- 响应示例:

```
代码块
1  [
2      {
3          "origin_id": "03b4588ee2694c67",
4          "destination_id": "0b5dba5f59e04ac4",
5          "train_number": "G1322",
6          "duration": "571",
7          "cost": "828.5",
8          "origin_station": "贵阳北站",
9          "destination_station": "上海虹桥站"
10     },
11     {
12         "origin_id": "70f161a35cb94c32",
13         "destination_id": "8b8f383fa60d4d73",
14         "train_number": "K210",
15         "duration": "1225",
```

```
16         "cost": "173.5",
17         "origin_station": "广州白云站",
18         "destination_station": "杭州站"
19     },
20     ...
21 ]
```

- 异常示例：

#### 400 - 参数错误

代码块

```
1  {
2      "error": "Invalid Parameter",
3      "message": "出发城市和目的地城市不能相同",
4      "timestamp": "2025-05-29T10:30:45.123456",
5      "path": "/cross-city-transport/"
6  }
```

#### 404 - 未找到数据

代码块

```
1  {
2      "error": "Data Not Found",
3      "message": "未找到从拉萨到三亚的交通方案",
4      "timestamp": "2025-05-29T10:30:45.123456",
5      "path": "/cross-city-transport/"
6  }
```

#### 503 - 数据库连接失败

代码块

```
1  {
2      "error": "Database Connection Error",
3      "message": "数据库认证失败",
4      "timestamp": "2025-05-29T10:30:45.123456",
5      "path": "/cross-city-transport/"
6  }
```

## 2. 获取市内所有POI数据

- **请求URL:** /poi-data/{city\_name}
- **请求方式:** GET application/json
- **请求参数:**

参数名	必选	类型	说明
city_name	是	string	

- **请求示例:**

代码块

```
1  "http://localhost:12457/poi-data/广州市"
```

- **响应示例:**

代码块

```
1  {
2      "attractions": [
3          {
4              "id": "008ea83f96d24ff7",
5              "name": "海涛园",
6              "cost": 0.0,
7              "type": "风景名胜",
8              "rating": 4.6,
9              "duration": "210"
10         },
11         ...
12     ],
13     "accommodations": [
14         {
15             "id": "56e0883abfd34c0c",
16             "name": "上海外滩东方美仑美奂酒店",
17             "cost": 1940.0,
18             "type": "五星级宾馆",
19             "rating": 4.6,
20             "feature": "下午茶"
21         },
22         ...
23     ],
24     "restaurants": [
```

```

25      {
26          "id": "40b1c0a1fc9b46d4",
27          "name": "三亚许福记砂锅米线",
28          "cost": 134.0,
29          "rating": 3.8,
30          "type": "中餐厅",
31          "recommended_food": "砂锅米线",
32          "queue_time": 0,
33          "duration": 120
34      },
35      ...
36  ]
37  }

```

- 异常示例：

#### 400 - 城市名称错误

代码块

```

1  {
2      "error": "Invalid Parameter",
3      "message": "城市名称格式不正确",
4      "timestamp": "2025-05-29T10:30:45.123456",
5      "path": "/poi-data/X"
6  }

```

#### 404 - 未找到POI数据

代码块

```

1  {
2      "error": "Data Not Found",
3      "message": "未找到城市'不存在的城市'的POI数据",
4      "timestamp": "2025-05-29T10:30:45.123456",
5      "path": "/poi-data/不存在的城市"
6  }

```

### 3. 获取市内所有景点数据

Get Attractions

- 请求URL: /attractions/{city\_name}
- 请求方式: GET application/json
- 请求参数:

参数名	必选	类型	说明
city_name	是	string	城市名称

请求示例:

代码块

```
1  "http://localhost:12457/attractions/杭州市"
```

响应示例:

```
1  [  
2      {  
3          "id": "018d2d18f5764406",  
4          "name": "香积寺",  
5          "cost": 20.0,  
6          "type": "寺庙道观",  
7          "rating": 4.7,  
8          "duration": 60.0  
9      },  
10     {  
11         "id": "060cb7c1ecb54fd9",  
12         "name": "思澄堂",  
13         "cost": 0.0,  
14         "type": "教堂",  
15         "rating": 4.5,  
16         "duration": 90.0  
17     },  
18     ...  
19 ]
```

异常示例:

404 - 未找到景点数据

代码块

```
1  {  
2      "error": "Data Not Found",  
3      "message": "未找到城市'火星市'的景点数据",  
4      "timestamp": "2025-05-29T10:30:45.123456",  
5      "path": "/attractions/火星市"  
6  }
```

## 4. 获取市内所有酒店数据

Get Accommodations

- 请求URL: /accommodations/{city\_name}
- 请求方式: GET application/json
- 请求参数:

参数名	必选	类型	说明
city_name	是	string	城市名称

- 请求示例:

代码块

```
1  "http://localhost:12457/accommodations/广州市"
```

- 响应示例:

```
1  [
2      {
3          "id": "009cc50469d3495b",
4          "name": "美景大酒店",
5          "cost": 721.0,
6          "type": "四星级宾馆",
7          "rating": 4.0,
8          "feature": "早茶"
9      },
10     {
11         "id": "118e3e7d21f6402e",
12         "name": "港润东亚大酒店(长堤大马路店)",
13         "cost": 594.0,
14         "type": "三星级宾馆",
15         "rating": 4.6,
16         "feature": "海鲜市场,沙面"
17     },
18     ...
19 ]
```

• 异常示例:

400 - 参数验证失败

代码块

```
1  {
2    "error": "Invalid Parameter",
3    "message": "城市名称不能为空",
4    "timestamp": "2025-05-29T10:30:45.123456",
5    "path": "/accommodations/ "
6  }
```

404 - 未找到酒店数据

代码块

```
1  {
2    "error": "Data Not Found",
3    "message": "未找到城市'月球市'的酒店数据",
4    "timestamp": "2025-05-29T10:30:45.123456",
5    "path": "/accommodations/月球市"
6  }
```

5. 获取市内所有饭店数据

| Get Restaurants

- 请求URL: /restaurants/{city\_name}
- 请求方式: GET application/json
- 请求参数:

参数名	必选	类型	说明
city_name	是	string	城市名称

• 请求示例:

代码块

```
1  "http://localhost:12457/restaurants/广州市"
```

• 响应示例:

```

1  [
2      {
3          "id": "17673400a49c4d2d",
4          "name": "有趣人类咖啡(永庆坊店)",
5          "cost": 373.0,
6          "type": "咖啡厅",
7          "duration": 120.0,
8          "rating": 4.6,
9          "recommended_food": "无",
10         "queue_time": 30.0
11     },
12     {
13         "id": "17fd48459ba94ce4",
14         "name": "瑞幸咖啡(力达广场店)",
15         "type": "餐饮相关",
16         "cost": 631.0,
17         "duration": 120.0,
18         "rating": 4.3,
19         "recommended_food": "陨石拿铁,陨石拿铁瑞纳冰,冰镇杨梅瑞纳冰,厚乳拿铁,海盐芝士厚乳拿铁,小火山黑糖厚乳,秋香厚乳拿铁,圣诞甜心厚乳拿铁,如梦令·功夫轻乳茶,生椰拿铁yyds,拿铁,夏日桃桃冰,椰子OK瑞纳冰,西柚冰萃咖啡,小陨石抹茶厚乳,杨枝甘露瑞纳冰,美式,菠萝的海瑞纳冰,牛油果森林瑞纳冰,SOE耶加雪菲美式,陨石厚乳拿铁,椰子,生椰拿铁,杨枝甘露",
20         "queue_time": 15.0
21     },
22     ...
23 ]

```

- 异常示例:

404 - 未找到餐厅数据

代码块

```

1  {
2      "error": "Data Not Found",
3      "message": "未找到城市'虚拟城市'的餐厅数据",
4      "timestamp": "2025-05-29T10:30:45.123456",
5      "path": "/restaurants/虚拟城市"
6  }

```

## 6. 获取市内所有景点<->住宿公交、打车数据

| Get Intra City Transport



- **请求URL:** /intra-city-transport
- **请求方式:** GET application/json
- **请求参数:**

参数名	必选	类型	说明
city_name	是	string	城市名称

- **请求示例:**

代码块

```
1 "http://localhost:12457/intra-city-transport/{city_name}"
```

- **响应示例:**

```
1 {
2     "002a8ced62eb4cf3,00739e9a324e4dd5": {
3         "taxi_duration": "15",
4         "taxi_cost": "13.0",
5         "bus_duration": "25",
6         "bus_cost": "3"
7     },
8     "002a8ced62eb4cf3,018d2d18f5764406": {
9         "taxi_duration": "36",
10        "taxi_cost": "13.0",
11        "bus_duration": "87",
12        "bus_cost": "5"
13    },
14    ...
15 }
```

- **异常响应:**

400 - 城市名称为空

代码块

```
1 {
2     "error": "Invalid Parameter",
3     "message": "城市名称不能为空",
4     "timestamp": "2025-05-29T10:30:45.123456",
```

```
5     "path": "/intra-city-transport/"
6 }
```

404 - 未找到交通数据

代码块

```
1  {
2    "error": "Data Not Found",
3    "message": "未找到城市'小镇'的市内交通数据",
4    "timestamp": "2025-05-29T10:30:45.123456",
5    "path": "/intra-city-transport/小镇"
6 }
```

7. 获取指定id的POI数据（景点、住宿、餐饮）

Get Poi By Id

- 请求URL: /poi/{poi\_id}
- 请求方式: GET application/json
- 请求参数:

参数名	必选	类型	说明
poi_id	是	string	

- 请求示例:

代码块

```
1  "http://localhost:12457/poi/00afb932325a40bb"
```

- 响应示例

- 景点

代码块

```
1  {
2    "id": "008ea83f96d24ff7",
3    "name": "海涛园",
```

```
4      "cost": 0.0,
5      "type": "风景名胜",
6      "rating": 4.6,
7      "duration": "210",
8      "city_name": "青岛市"
9  }
```

- 住宿

代码块

```
1  {
2      "id": "05400f44f2af4976",
3      "name": "南京金陵大厦",
4      "cost": 739.0,
5      "type": "三星级宾馆",
6      "rating": 4.4,
7      "feature": "无",
8      "city_name": "南京市"
9  }
```

- 餐饮

代码块

```
1  {
2      "id": "8b197fa06ffe4b54",
3      "name": "湘赣百姓菜馆",
4      "cost": 905.00,
5      "type": "湖南菜(湘菜)",
6      "rating": 4.00,
7      "recommended_food": "无",
8      "queue_time": 0,
9      "duration": 90,
10     "city_name": "北京市"
11 }
```

- 异常示例:

400 - POI ID错误

代码块

```
1  {
2      "error": "Invalid Parameter",
```

```
3     "message": "POI ID不能为空",
4     "timestamp": "2025-05-29T10:30:45.123456",
5     "path": "/poi/ "
6 }
```

404 - 未找到POI

代码块

```
1  {
2      "error": "Data Not Found",
3      "message": "未找到ID为 'nonexistent_poi_123' 的POI",
4      "timestamp": "2025-05-29T10:30:45.123456",
5      "path": "/poi/nonexistent_poi_123"
6  }
```

8. 获取两点间公交、打车数据

Get Transport Params

- 请求URL: /transport-params
- 请求方式: POST application/json
- 请求参数:

参数名	必选	类型	说明
origin_id	是	string	起点poi_id
destination_id	是	string	终点poi_id

- 请求示例:

```
1  {
2      "origin_id": "002a8ced62eb4cf3",
3      "destination_id": "0615fd995f7b4b5c",
4  }
```

- 响应示例:

代码块

```
1  {
```

```
2     "bus_duration": "15",
3     "bus_cost": "13",
4     "taxi_duration": "25",
5     "taxi_cost": "3"
6 }
```

- 异常示例:

#### 400 - 参数相同

代码块

```
1  {
2    "error": "Invalid Parameter",
3    "message": "起点ID和终点ID不能相同",
4    "timestamp": "2025-05-29T10:30:45.123456",
5    "path": "/transport-params"
6  }
```

#### 404 - 未找到交通参数

代码块

```
1  {
2    "error": "Data Not Found",
3    "message": "未找到从'poi_001'到'poi_999'的交通参数",
4    "timestamp": "2025-05-29T10:30:45.123456",
5    "path": "/transport-params"
6  }
```

#### 422 - 请求体验证失败

代码块

```
1  {
2    "error": "Validation Error",
3    "message": "请求参数验证失败",
4    "details": [
5      {
6        "type": "missing",
7        "loc": ["body", "origin_id"],
8        "msg": "Field required",
9        "input": {"destination_id": "poi_002"}
10     }
11   ],
```

```
12     "timestamp": "2025-05-29T10:30:45.123456",
13     "path": "/duration-params"
14 }
```

## 9. 获取某个车次在A车站->B车站的数据

Get Train By Number

- 请求URL: /train/{train\_number}
- 请求方式: GET application/json
- 请求参数:

参数名	必选	类型	说明
train_number	是	string	动车号
origin_id	是	string	起始站点
destination_id	是	string	目的站点

- 请求示例:

代码块

```
1  "http://localhost:12457/train?
   train_number=G1484&origin_id=03b4588ee2694c67&destination_id=22c41e8973754a33"
```

- 响应示例:

代码块

```
1  {
2      "train_number": "G1484",
3      "origin_id": "03b4588ee2694c67",
4      "origin_city": "贵阳市",
5      "origin_station": "贵阳北站",
6      "destination_id": "22c41e8973754a33",
7      "destination_city": "南京市",
8      "destination_station": "南京南站",
9      "price": "843.5",
10     "duration": "588"
11 }
```

- 异常示例:

#### 400 - 车次号格式错误

代码块

```
1  {
2    "error": "Invalid Parameter",
3    "message": "始发站ID和终点站ID不能相同",
4    "timestamp": "2025-05-29T10:30:45.123456",
5    "path": "/train"
6  }
```

#### 404 - 未找到列车信息

代码块

```
1  {
2    "error": "Data Not Found",
3    "message": "未找到车次号为'Z9999'的列车",
4    "timestamp": "2025-05-29T10:30:45.123456",
5    "path": "/train"
6  }
```

#### 422 - 查询参数验证失败

代码块

```
1  {
2    "error": "Validation Error",
3    "message": "请求参数验证失败",
4    "details": [
5      {
6        "type": "string_too_long",
7        "loc": ["query", "train_number"],
8        "msg": "String should have at most 20 characters",
9        "input": "very_long_train_number_that_exceeds_limit"
10     }
11   ],
12   "timestamp": "2025-05-29T10:30:45.123456",
13   "path": "/train"
14 }
```

## 10. 获取所有城市数据

## Get Cities

- **请求URL:** /all-cities
- **请求方式:** GET application/json
- **请求参数:** 无
- **请求示例:**

代码块

```
1 "http://localhost:12457/all-cities"
```

- **响应示例:**

代码块

```
1  [  
2    {  
3      "city_code": "010",  
4      "city_name": "北京市"  
5    },  
6    {  
7      "city_code": "020",  
8      "city_name": "广州市"  
9    },  
10   {  
11     "city_code": "021",  
12     "city_name": "上海市"  
13   },  
14   ...  
15  ]
```

- **异常示例:**

503 - 数据库查询错误

代码块

```
1  {  
2    "error": "Database Error",  
3    "message": "数据库查询城市列表错误 (错误代码: 1146)",  
4    "details": "Table 'poi_base.poi_city' doesn't exist",  
5    "timestamp": "2023-08-10T15:34:25.781245",  
6    "path": "/all-cities"  
7  }
```



## 500 - 服务器内部错误

代码块

```
1  {
2    "error": "Internal Server Error",
3    "message": "服务器内部错误",
4    "details": "列表解析时出现未预期的类型错误",
5    "timestamp": "2025-08-10T15:36:10.129834",
6    "path": "/all-cities"
7  }
```

## 全局通用异常

### 1. 数据库连接异常 (503)

代码块

```
1  {
2    "error": "Database Connection Error",
3    "message": "数据库服务器无法连接",
4    "timestamp": "2025-05-29T10:30:45.123456",
5    "path": "/cross-city-transport/"
6  }
```

### 2. 数据未找到异常 (404)

代码块

```
1  {
2    "error": "Data Not Found",
3    "message": "未找到从北京到上海的交通方案",
4    "timestamp": "2025-05-29T10:30:45.123456",
5    "path": "/cross-city-transport/"
6  }
```

### 3. 参数验证异常 (400)

代码块

```
1  {
2    "error": "Invalid Parameter",
3    "message": "城市名称不能为空",
4    "timestamp": "2025-05-29T10:30:45.123456",
5    "path": "/cross-city-transport/"
6  }
```

```
6 }
```

#### 4. 请求验证异常 (422)

代码块

```
1  {
2    "error": "Validation Error",
3    "message": "请求参数验证失败",
4    "details": [
5      {
6        "type": "string_too_short",
7        "loc": ["query", "origin_city"],
8        "msg": "String should have at least 1 characters",
9        "input": ""
10     }
11   ],
12   "timestamp": "2025-05-29T10:30:45.123456",
13   "path": "/cross-city-transport/"
14 }
```

#### 5. MySQL数据库异常 (500)

代码块

```
1  {
2    "error": "Database Error",
3    "message": "数据库操作失败 (错误代码: 1146)",
4    "details": "Table 'poi_base.train_info' doesn't exist",
5    "timestamp": "2025-05-29T10:30:45.123456",
6    "path": "/cross-city-transport/"
7  }
```

#### 6. 通用服务器异常 (500)

代码块

```
1  {
2    "error": "Internal Server Error",
3    "message": "服务器内部错误",
4    "details": "division by zero",
5    "timestamp": "2025-05-29T10:30:45.123456",
6    "path": "/attractions/北京"
7  }
```

