

我的开源之路

我选择开源事业并成为开发者布道师的理由

古思为

DEVELOPER ADVOCATE @  vesoft



古思为

-  Software Engineer @ Shanghai
-  Open Source Believer
-  Developer Advocate of Nebula Graph
-  Ex-OpenStacker

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Overview

-  路径 - 我如何意外地成为了开源开发者（布道师）？
-  C. L. F. A. H. 原则
-  为什么热爱开源？
-  Why Nebula ?
-  开发者布道师是做什么的？

siwei.io/talks/coscon-2021



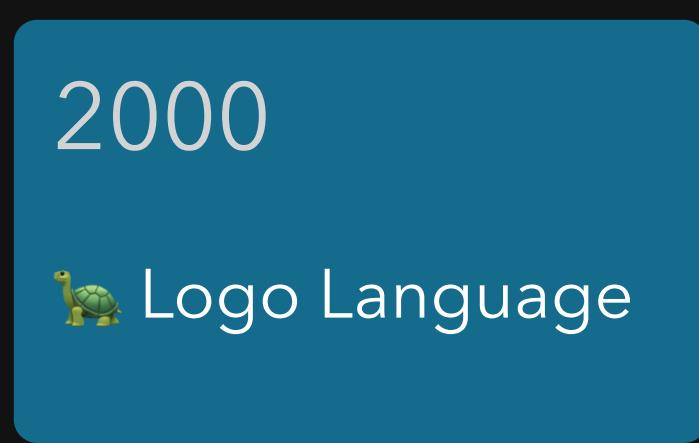
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The Path

成为开源开发者（布道师）的路径

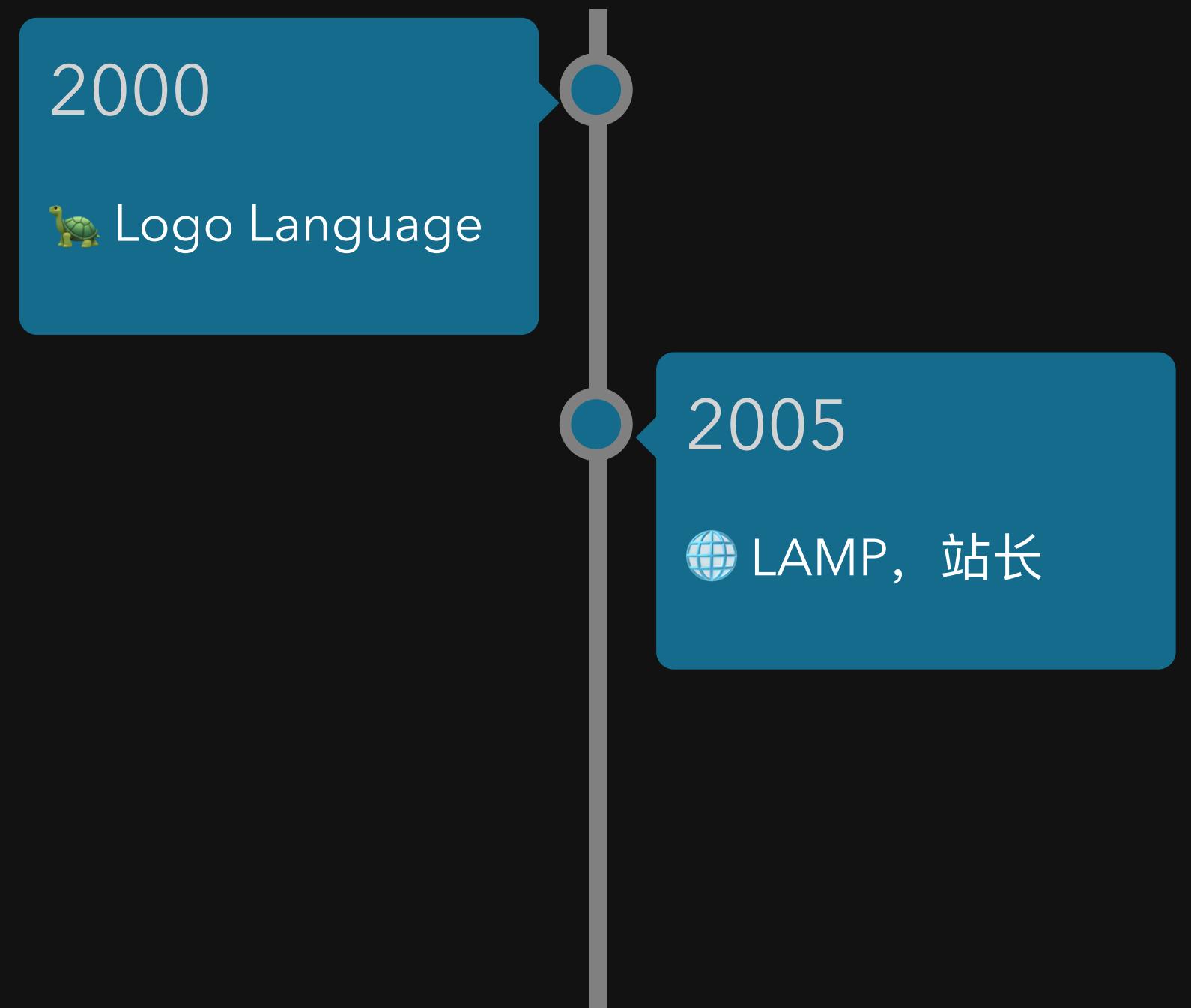
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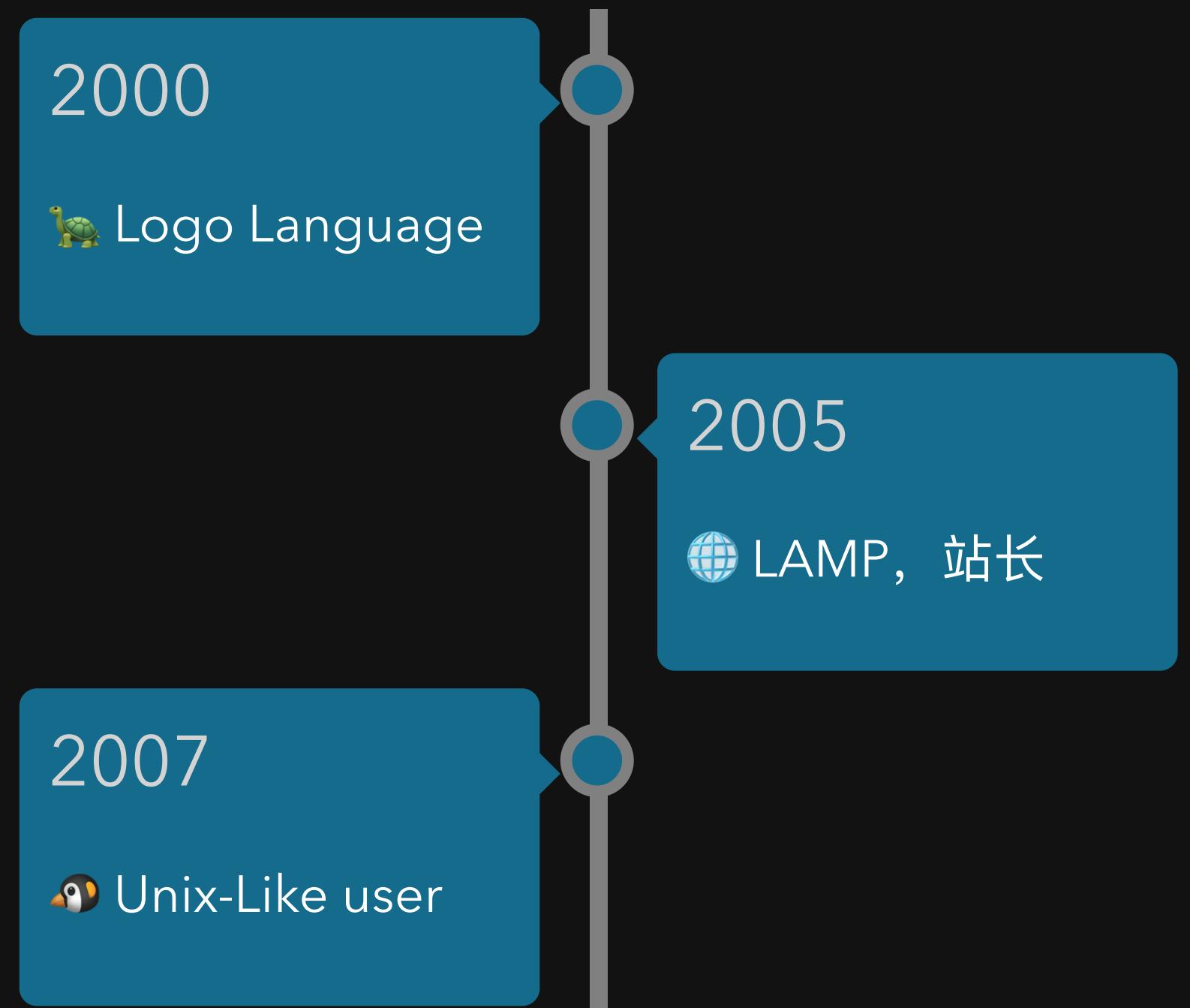
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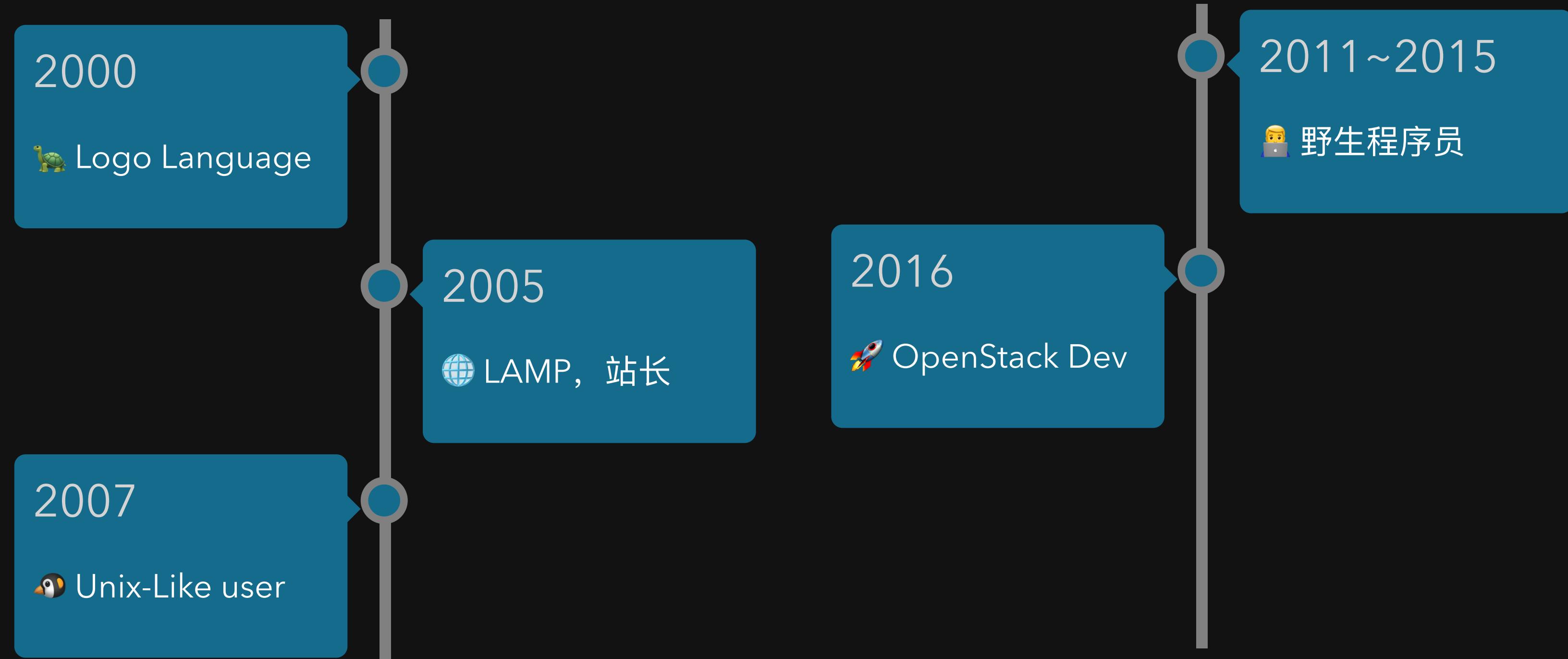
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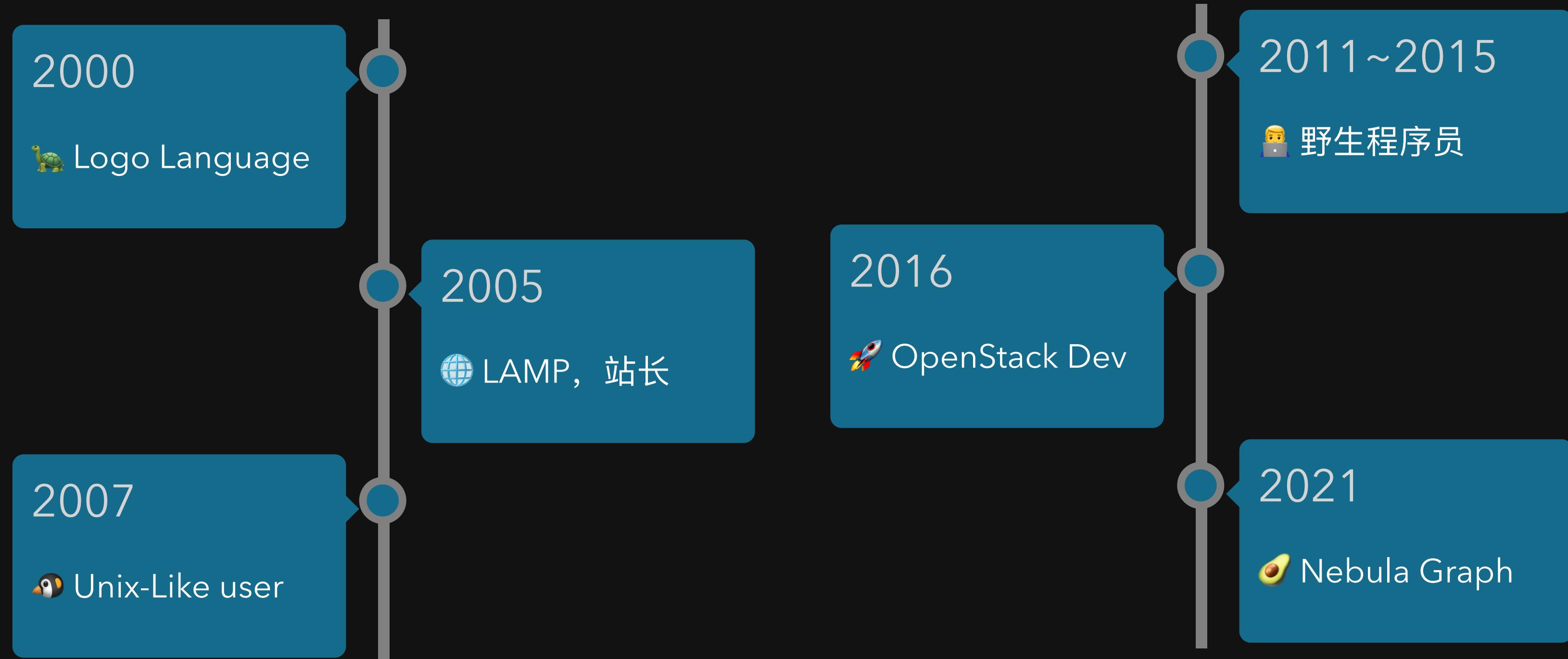
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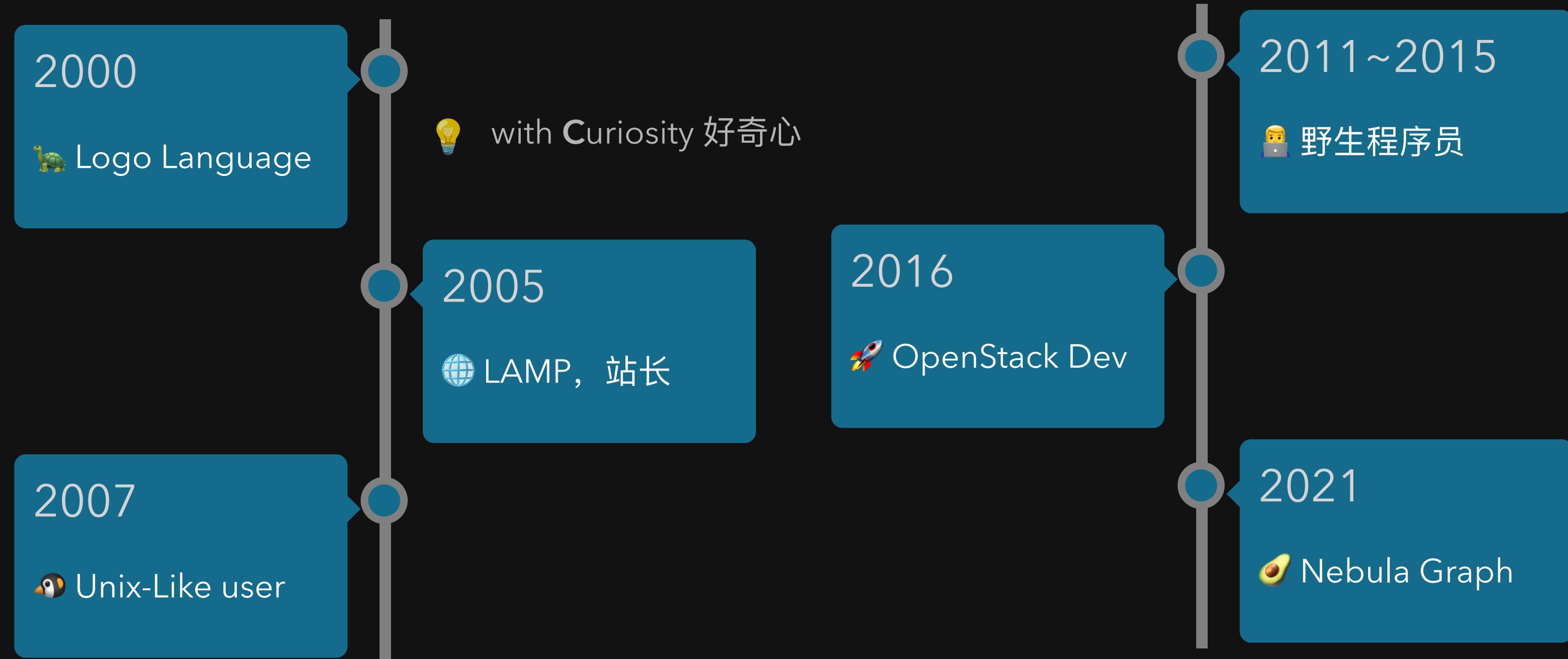
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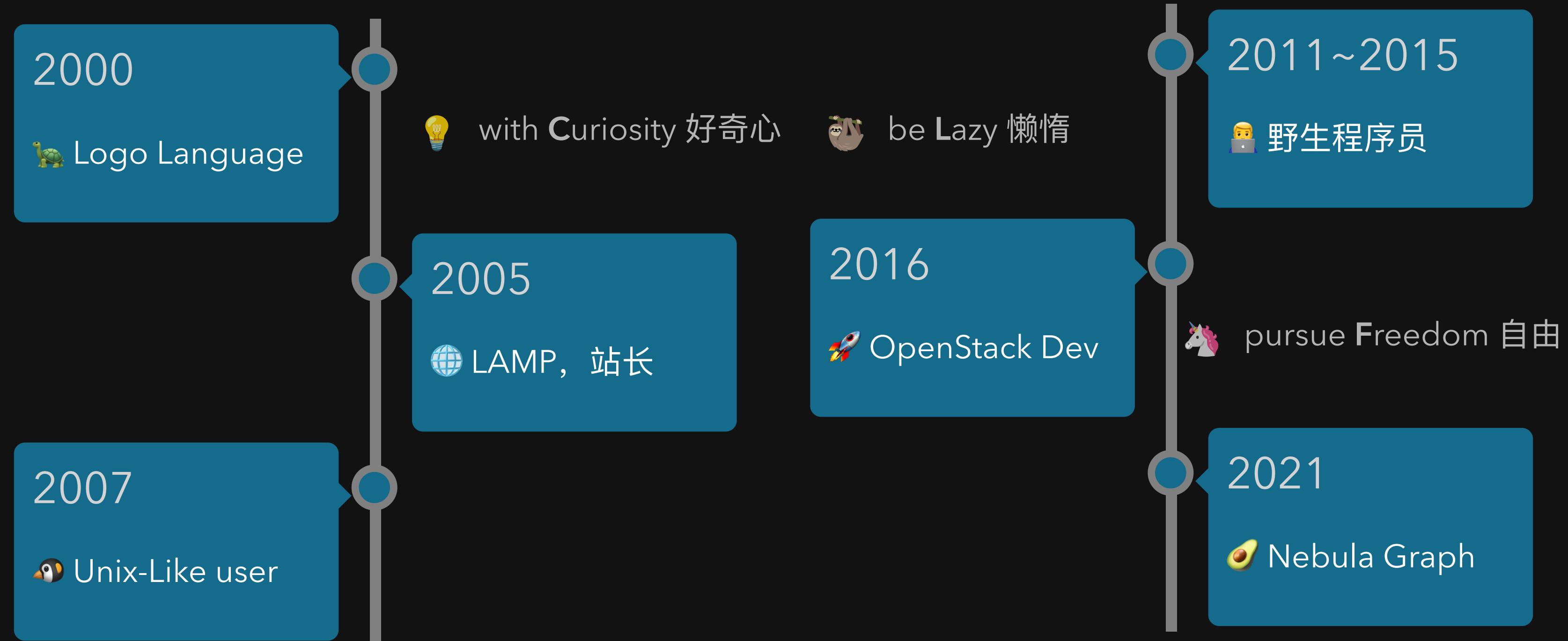
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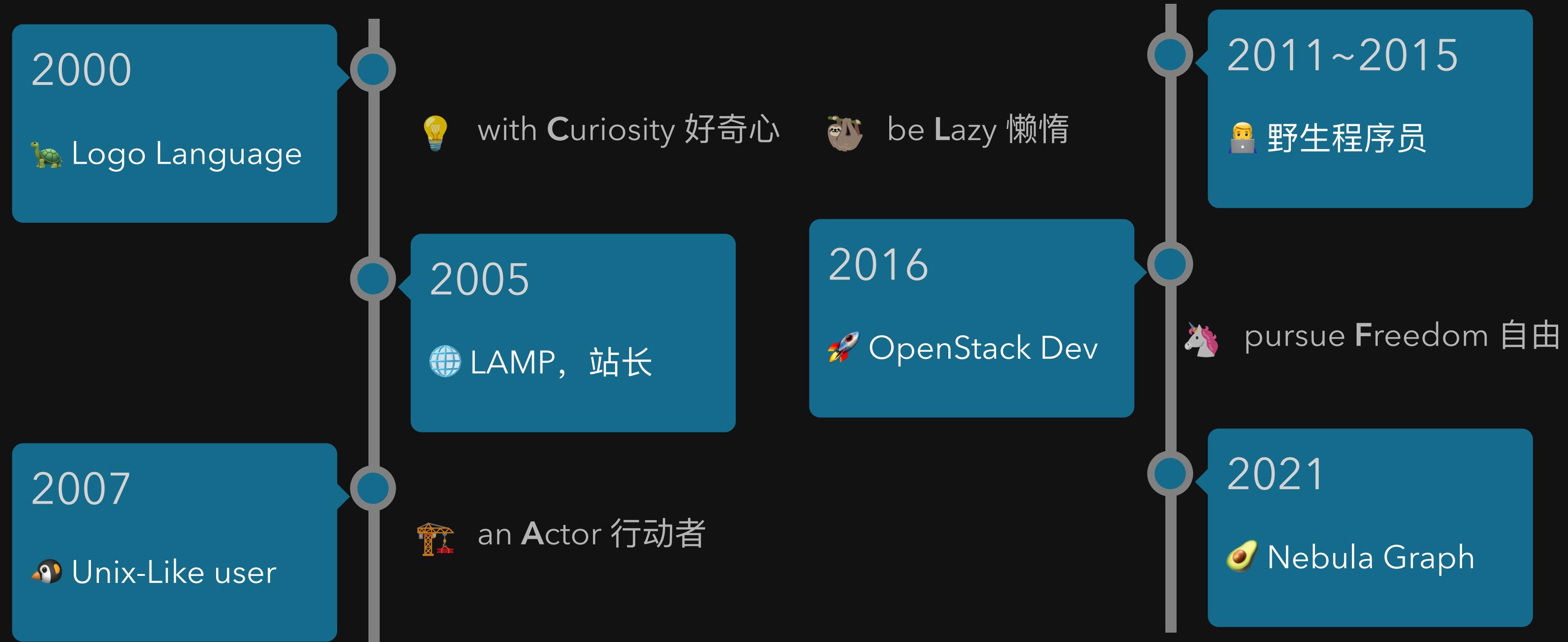
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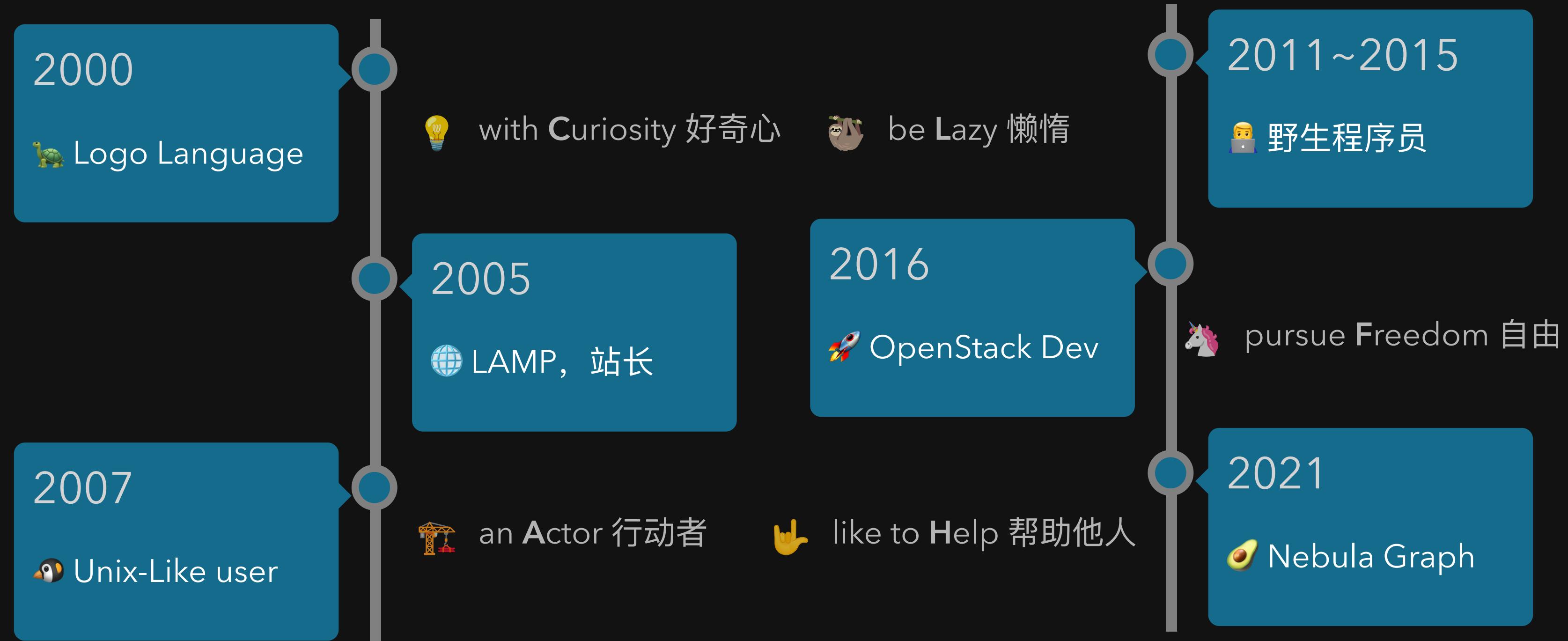
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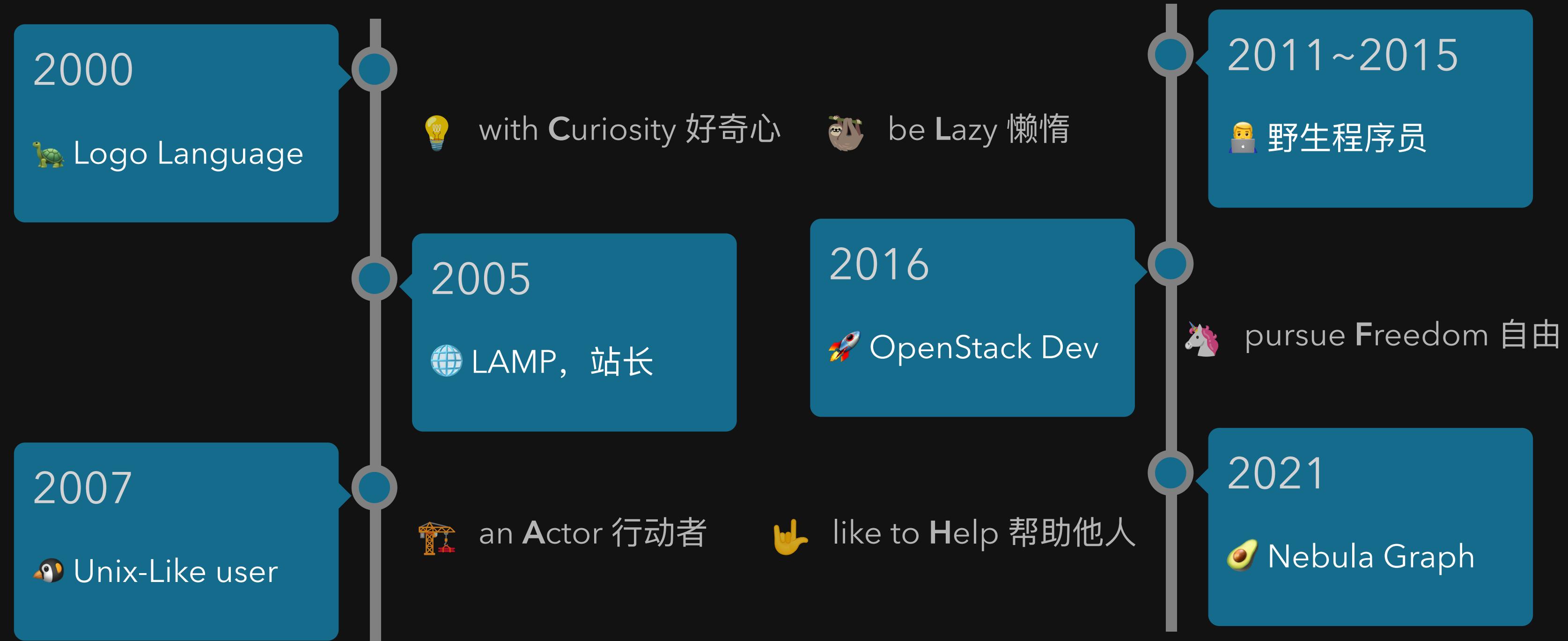
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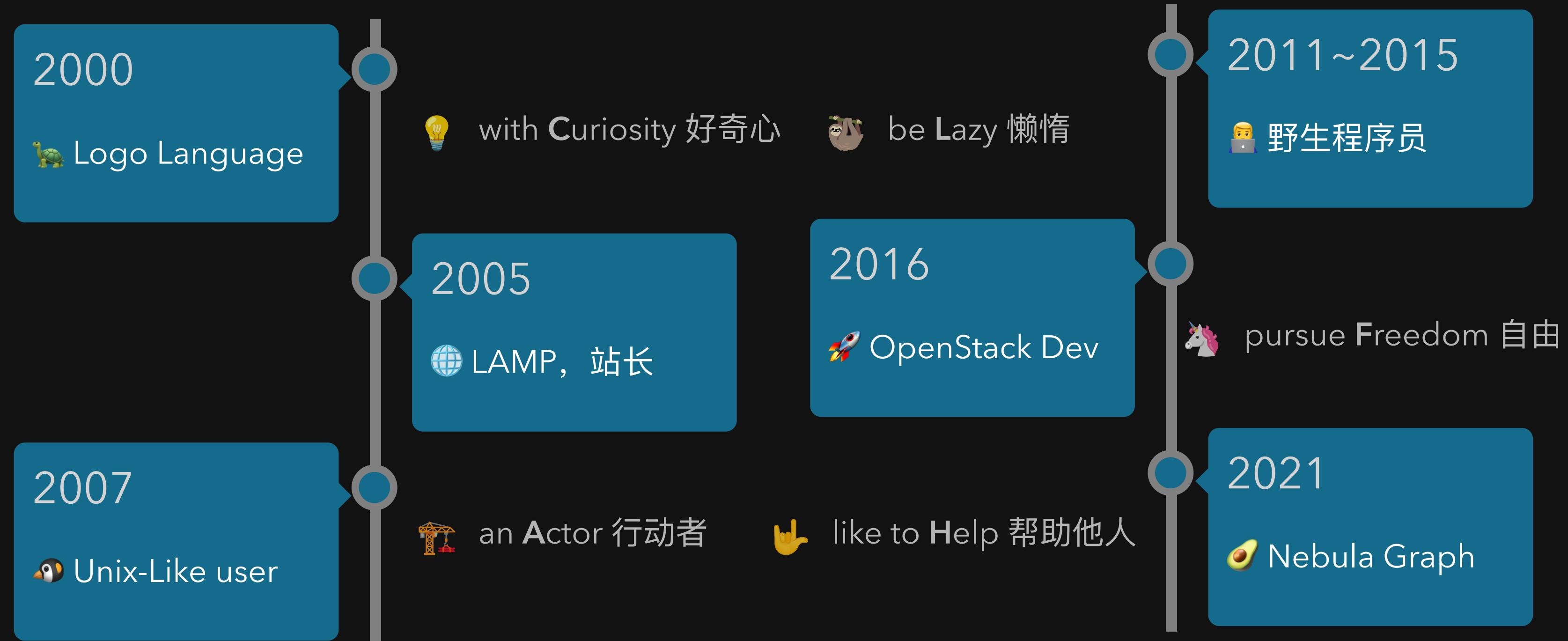
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C. L. F. A. H. 原则

成为开源开发者的原动力

 Curiosity 好奇心

 Lazy 懒惰

 Freedom 自由

 Actor 行动者

 Help 帮助他人

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Ahmet Alp Balkan
@ahmetb

Working in open source (and getting paid for it) is a privilege. It's a career boost, makes you lots of friends across the industry, and gives you a public brand.

I am one of the "lucky few" & thankful to Microsoft and Google who let me work on OSS nearly all my career.

4:04 AM · 20 Feb, 2021

2 replies 26 shares 370 likes

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Kelsey Hightower (@kelseyhightower) posted a tweet on October 20, 2018, at 4:58 AM. The tweet reads:
Once you've found success, your next goal should be helping others do the same.

The tweet was posted at 4:58 AM on October 20, 2018, and has 67 replies, 1.7K shares, and 5.7K likes.

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Build Things with Magic, and **Scale** the Magic by helping others

用魔法创造， 并把魔法传授给别人



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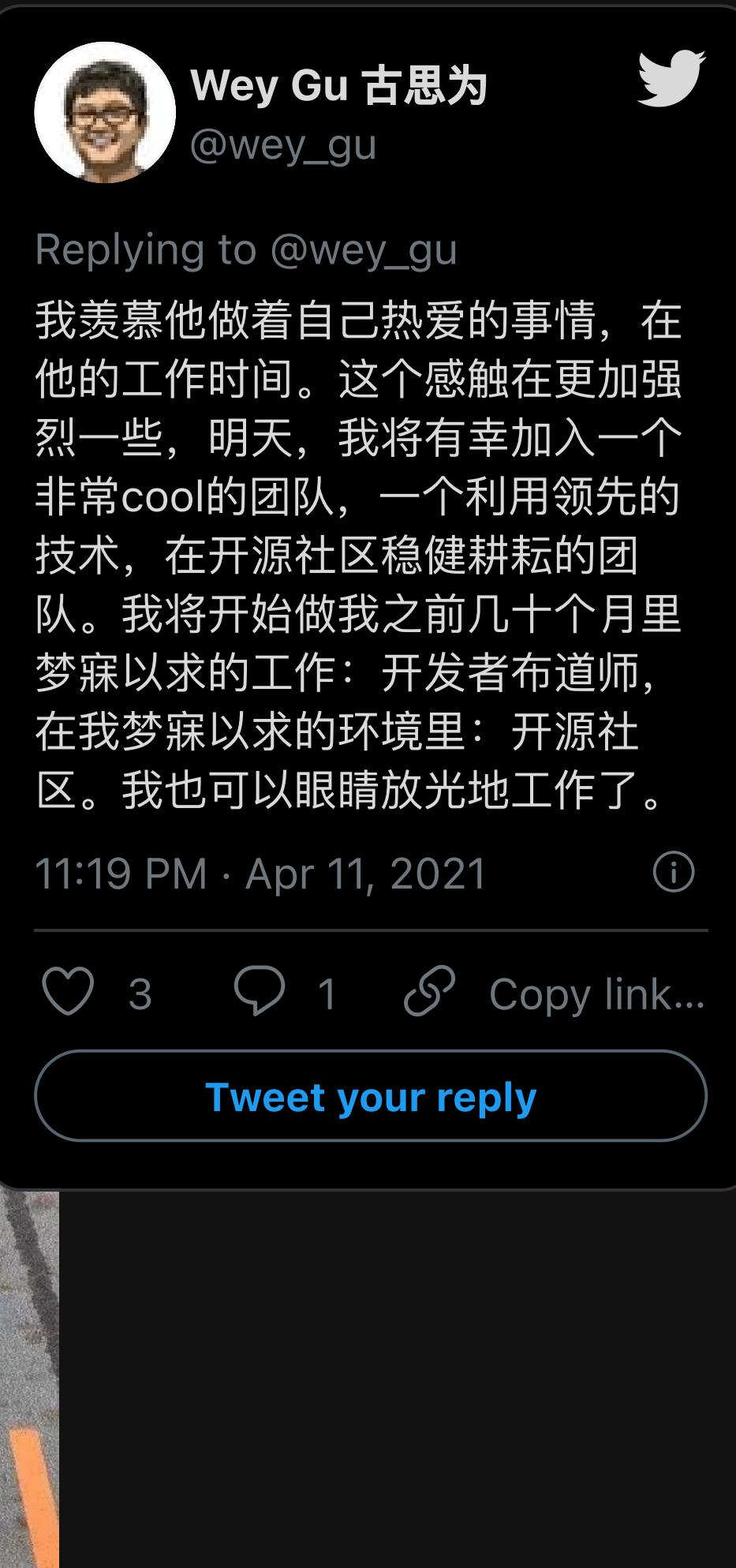
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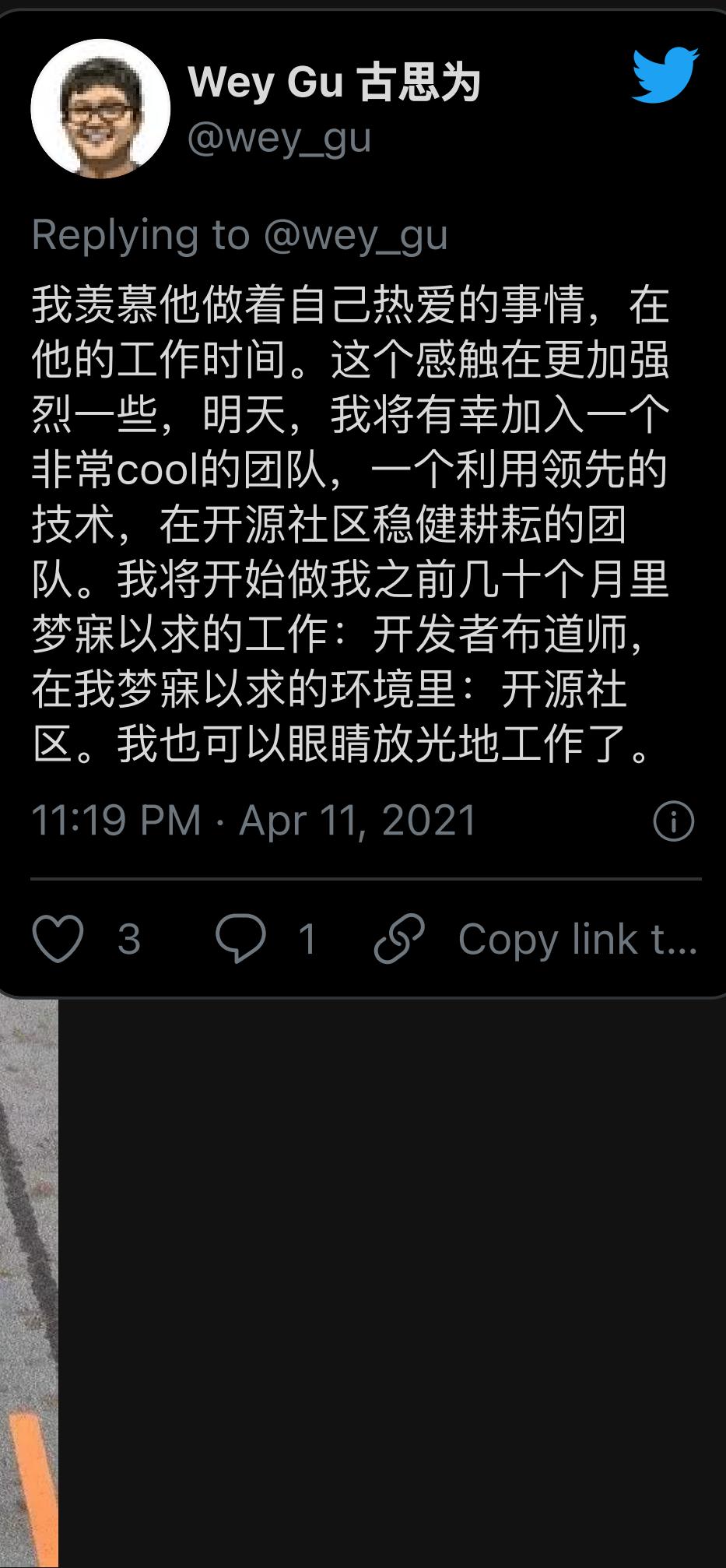


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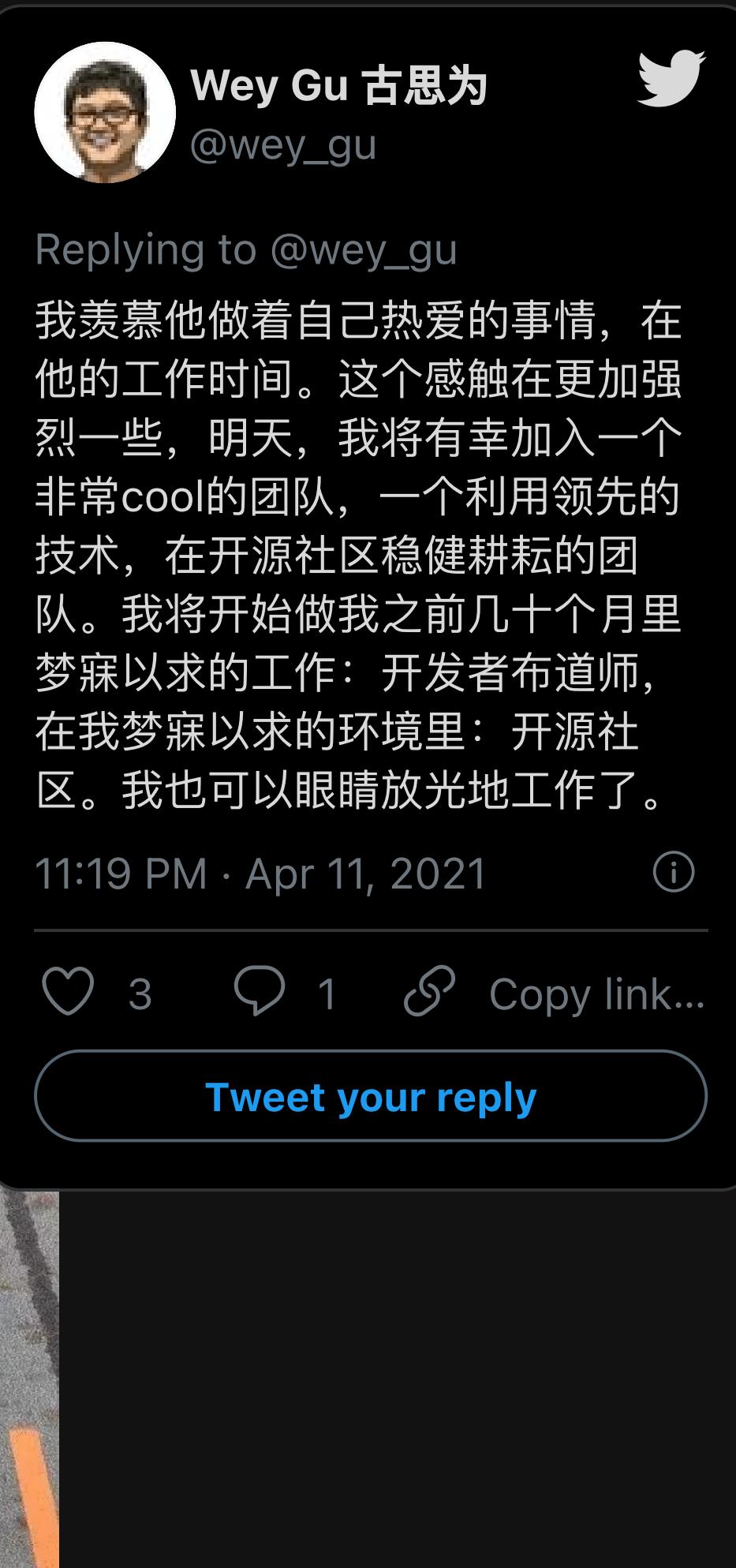


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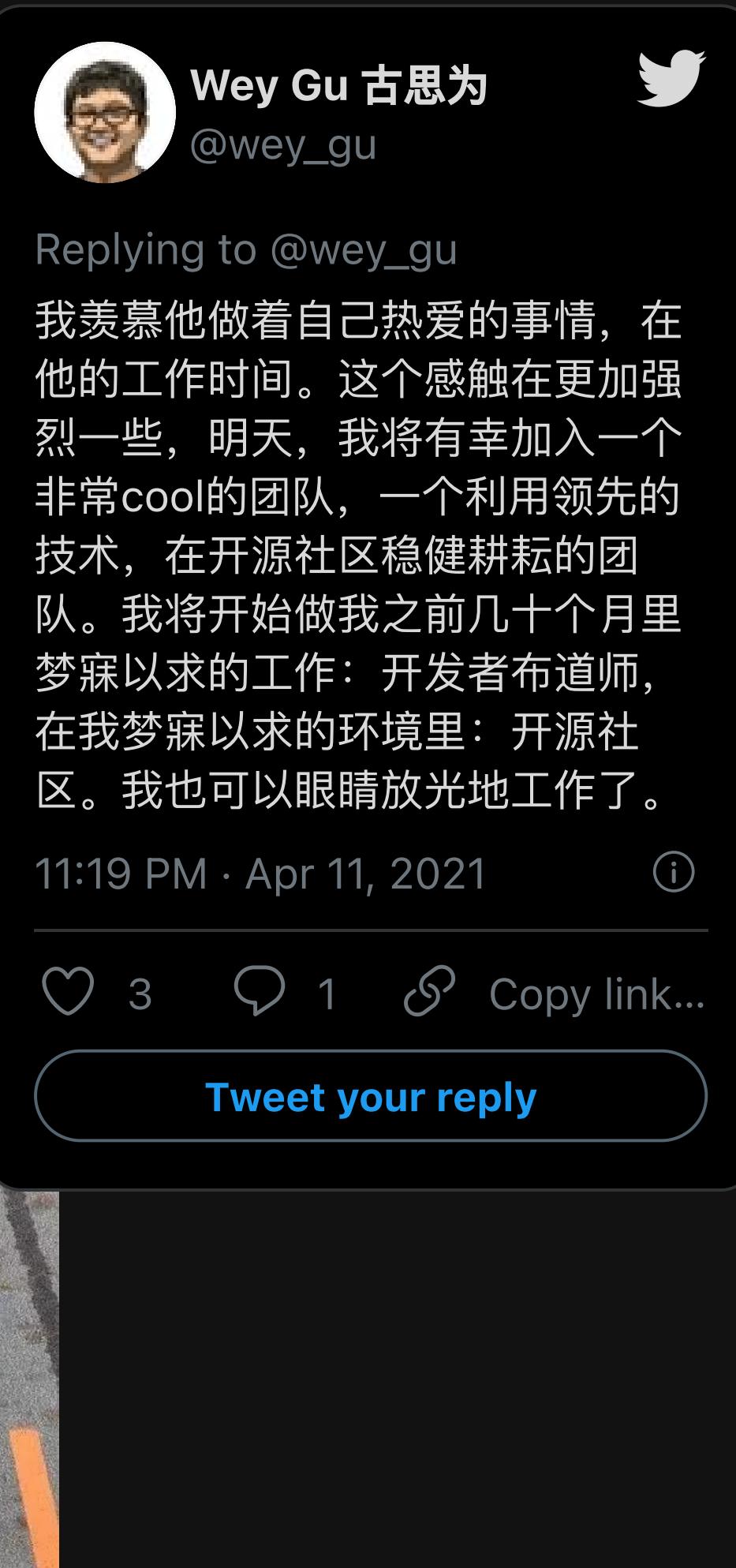


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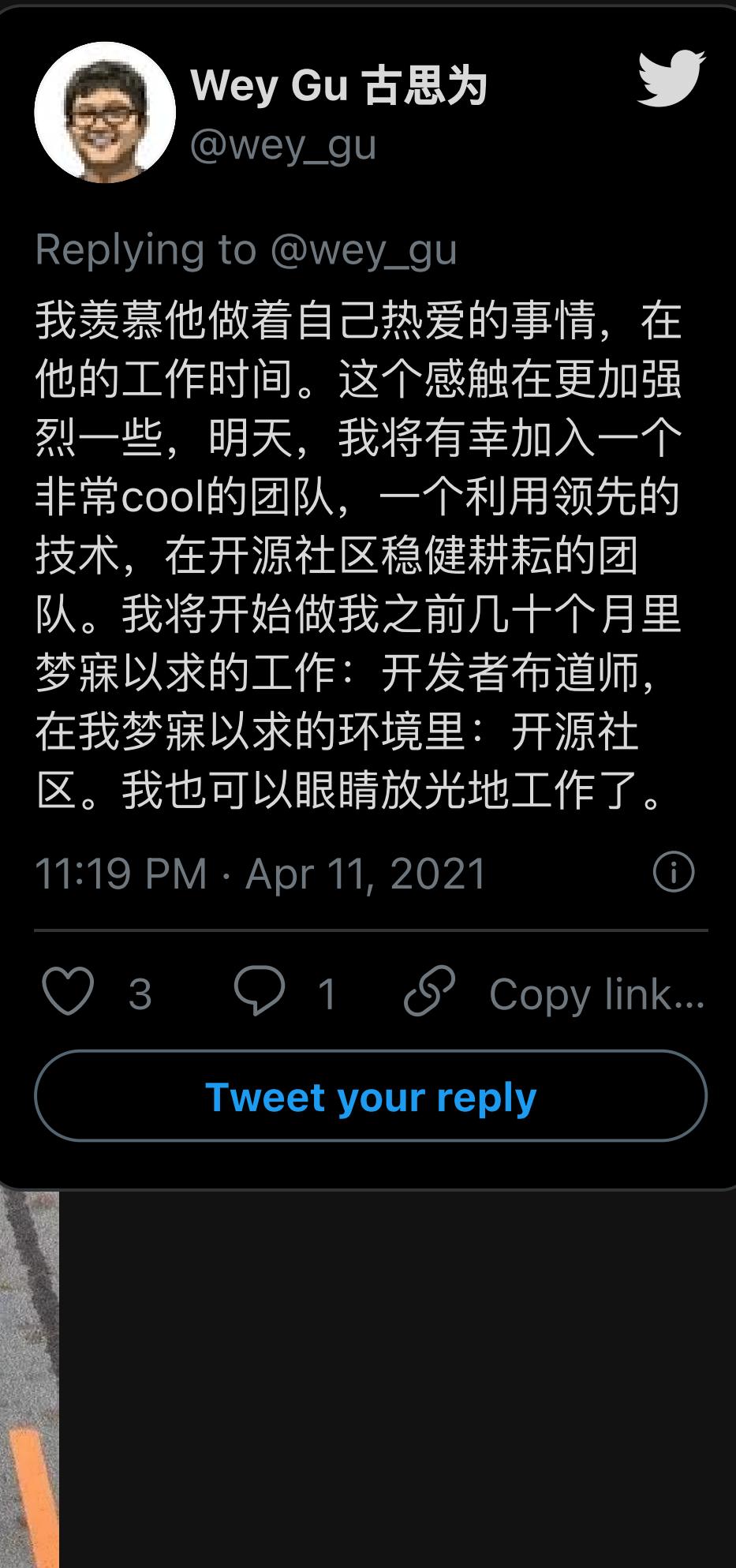


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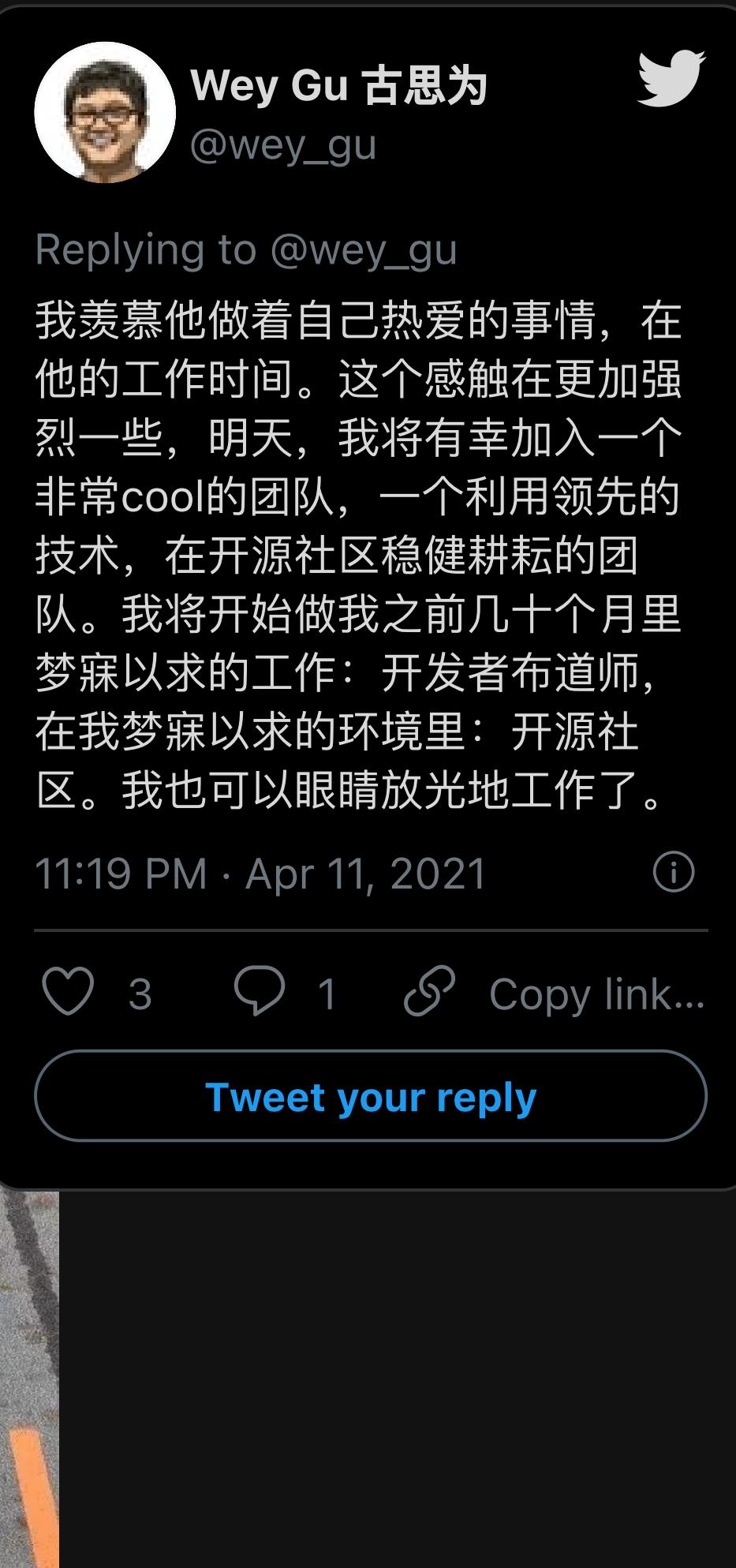


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Scale makes differences
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Martin Beeby @thebeebz

Small and medium businesses may have similar problems to big tech companies. But should never assume they need to use the same solution. The answer is not always a shiny new library, a complicated frontend build process, or the latest orchestrator. It is all a matter of scale.



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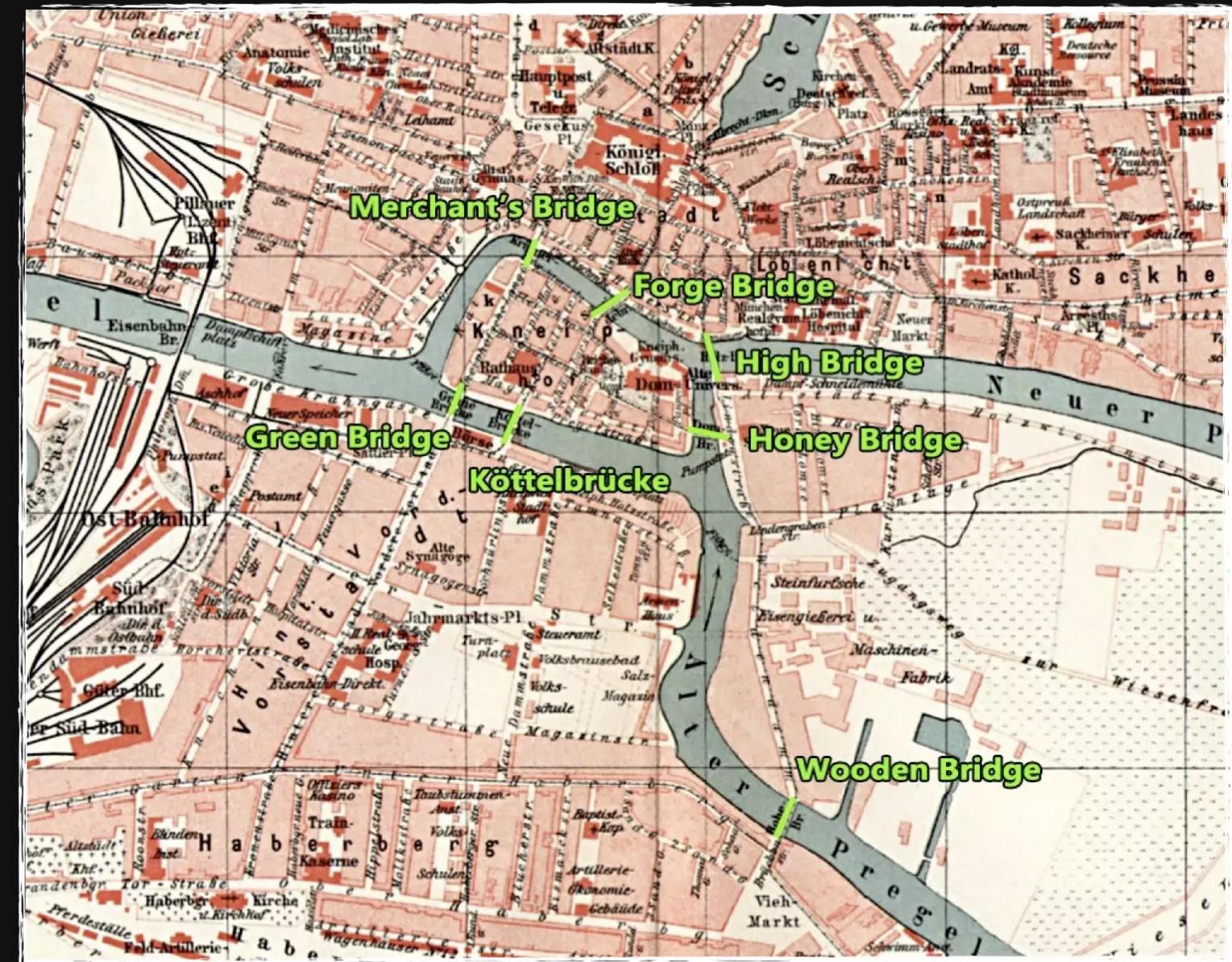
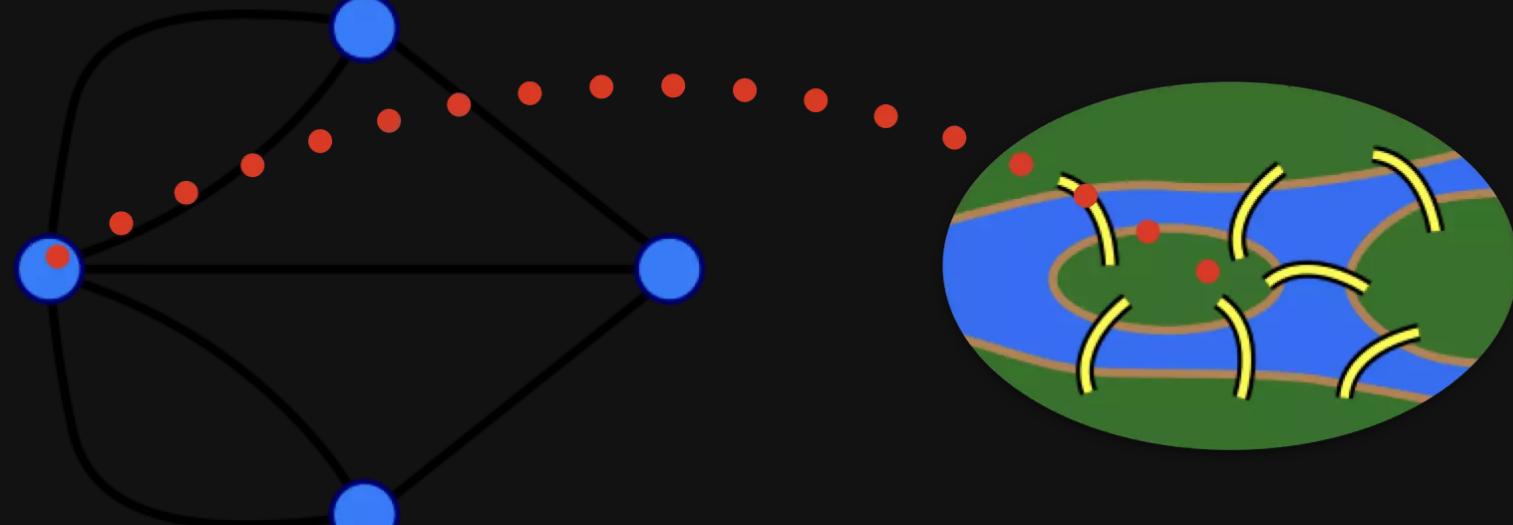


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图数据库简介

什么是图？ 什么是图数据库？ 为什么我们需要一个专门的数据库？

什么是图？



Map of Königsberg with the seven bridges labeled, circa 1905

"以图结构、图语义来用点、边、属性来查询、表示存储数据的数据库

什么是图数据库

[wikipedia.org/wiki/graph_database](https://en.wikipedia.org/wiki/Graph_database)

了解更多关于 [什么是图数据库](#)

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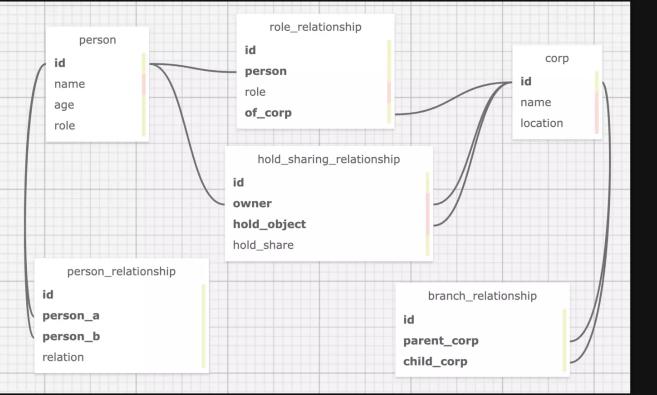
传统数据库

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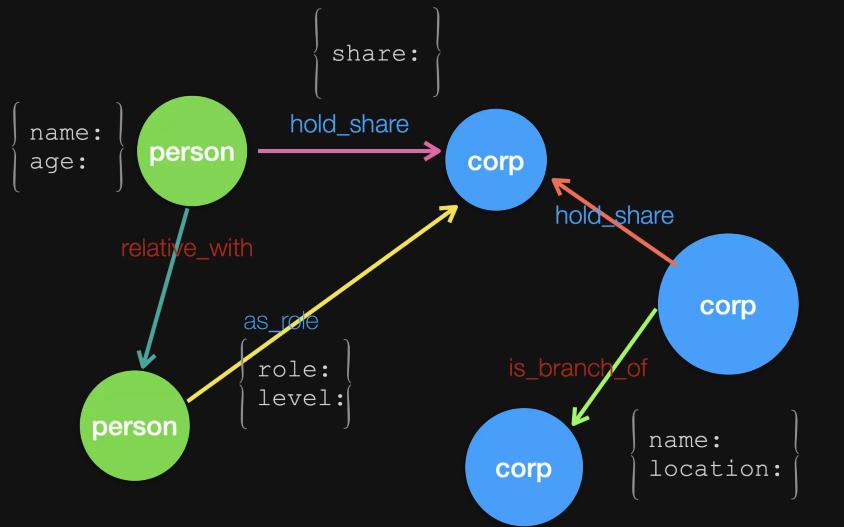
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传统数据库

图模型的结构



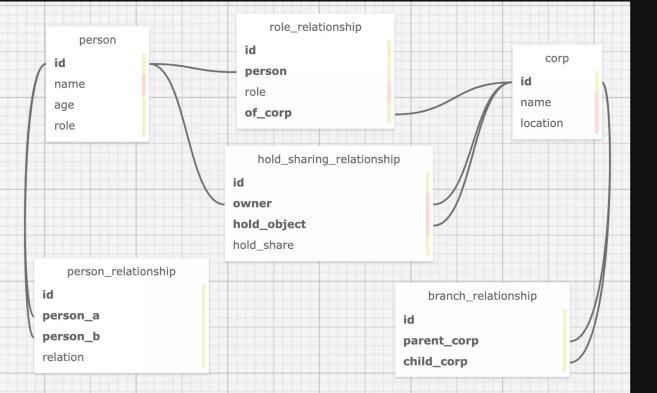
图数据库



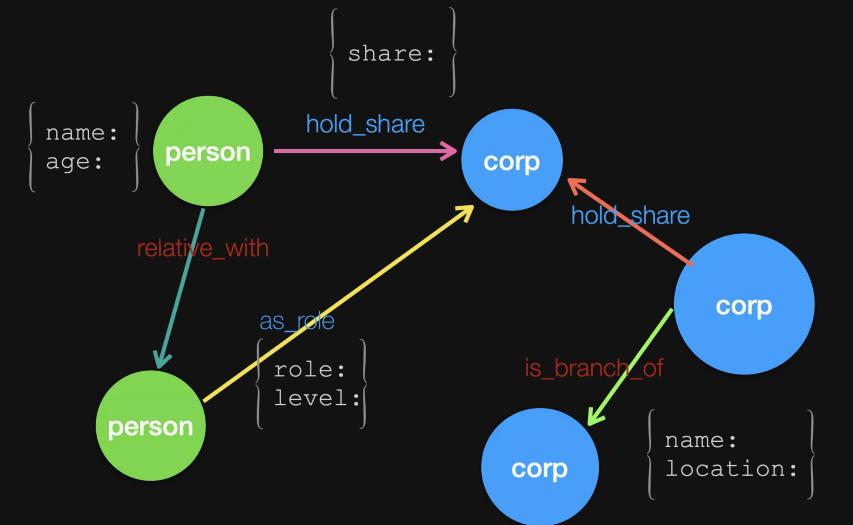
为什么需要图数据库？

传统数据库

图模型的结构



图数据库



图语义的查询

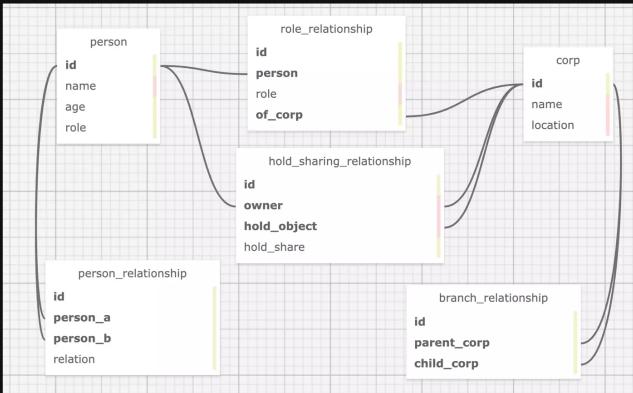
```
SELECT a.id, a.name, c.name
FROM player a
JOIN serve b ON a.id=b.player_id
JOIN team c ON c.id=b.team_id
WHERE c.name IN (SELECT c.name
FROM player a
JOIN serve b ON a.id=b.player_id
JOIN team c ON c.id=b.team_id
WHERE a.name = 'Tim Duncan')
```

```
GO FROM 100 OVER serve YIELD serve._dst AS Team | \
GO FROM $-.Team OVER serve REVERSELY YIELD $$ .player.name;
```

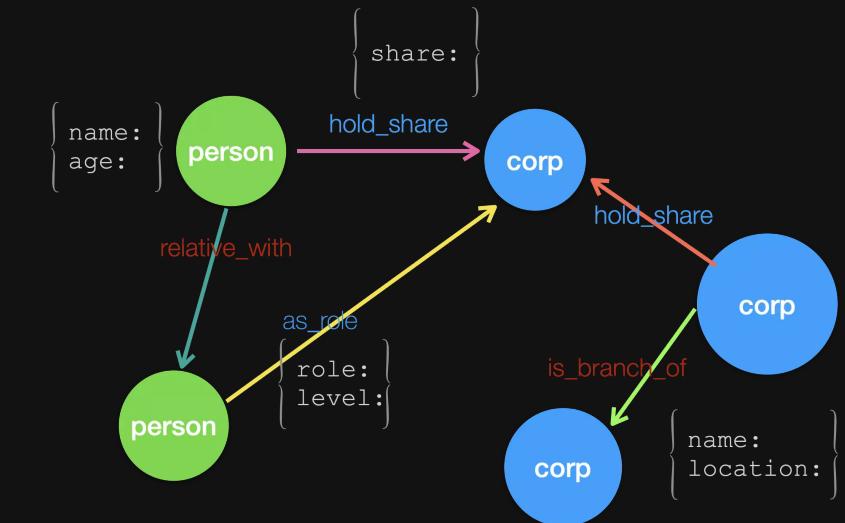
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传统数据库

图模型的结构



图数据库



图语义的查询

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GO FROM 100 OVER serve YIELD serve._dst AS Team | \
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性能

	主要应用场景	2-hop 延时 (~2.5K)	3-hop 延时 (~110K)	4-hop 延时 (~600K)
图数据库	关系遍历	0.01 秒	0.168 秒	1.36 秒
SQL数据库	信息检索	0.016 秒	30 秒	1544 秒

Nebula Graph!

如何发音：['nebjələ]，它有哪些特点？

Nebula Graph 介绍

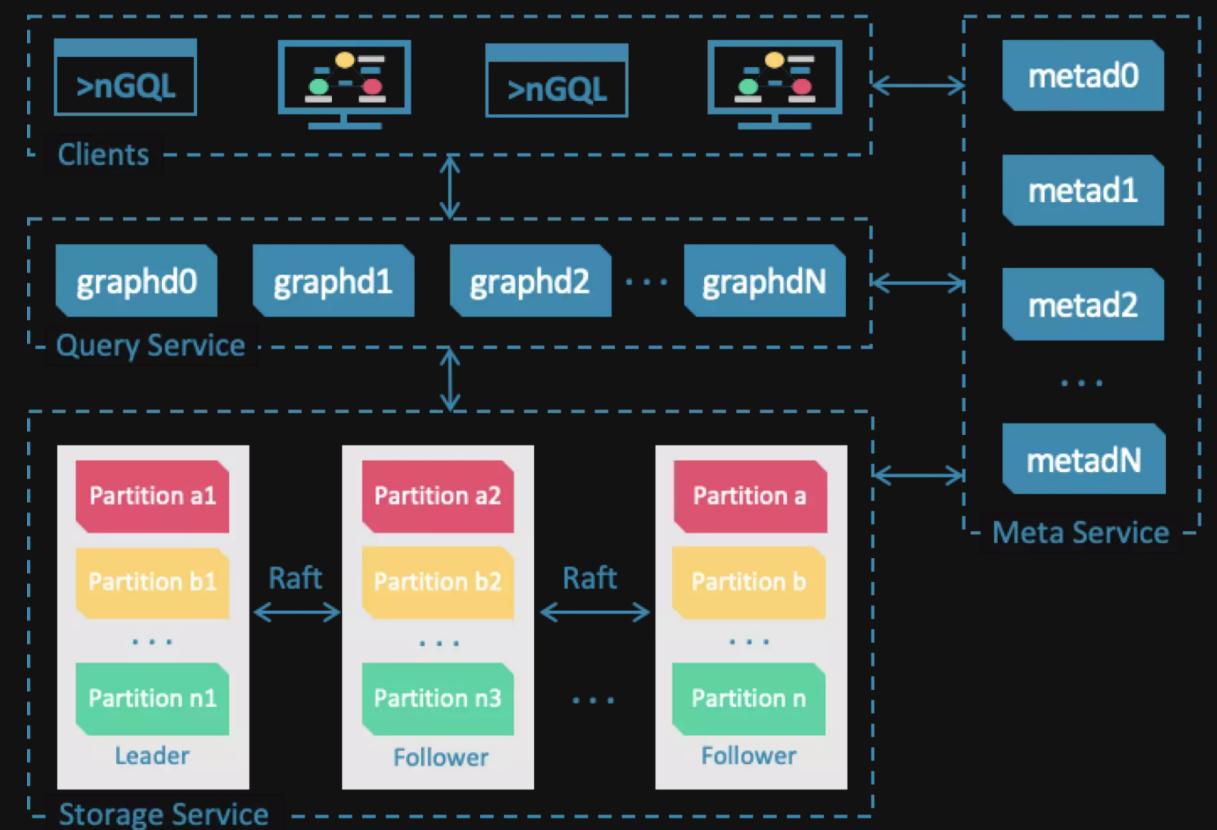
一个可靠的分布式、线性扩容、性能高效的图数据库

世界上唯一能够容纳千亿顶点和万亿条边，并提供毫秒级查询延时的图数据库解决方案

Nebula Graph 介绍

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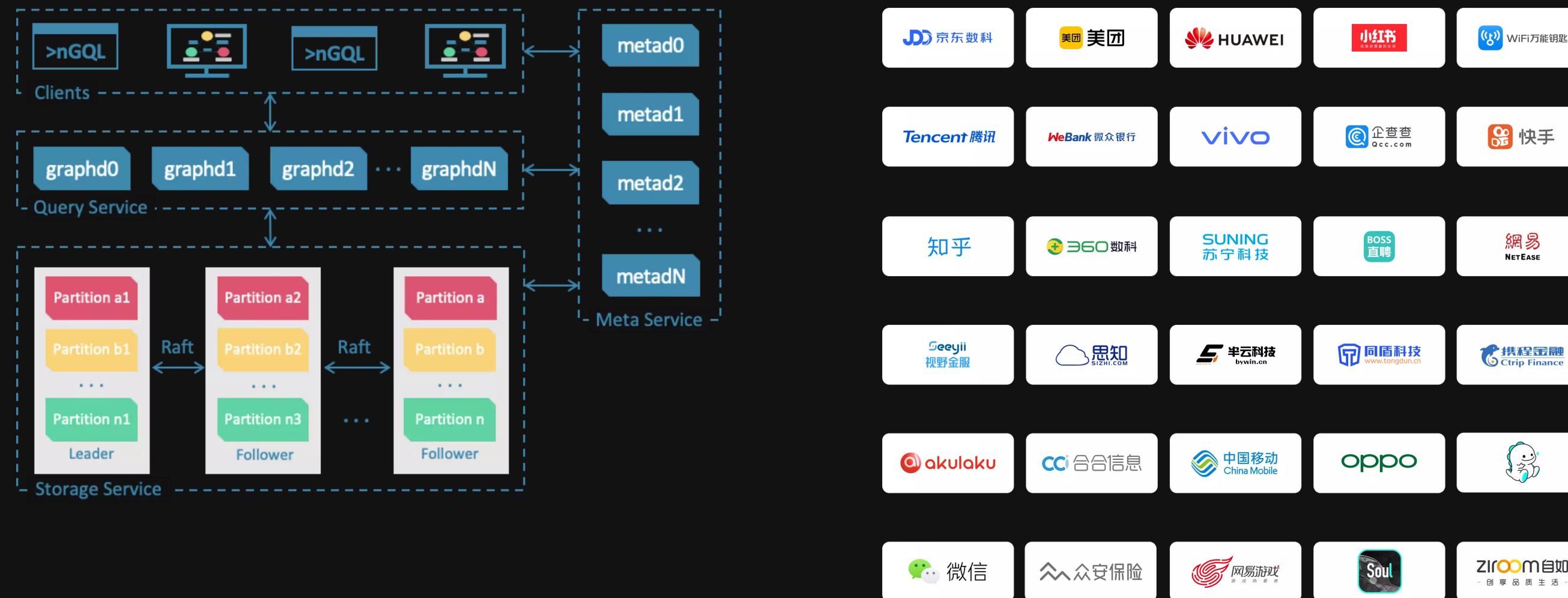
世界上唯一能够容纳千亿顶点和万亿条边，并提供毫秒级查询延时的图数据库解决方案



Nebula Graph 介绍

一个可靠的分布式、线性扩容、性能高效的图数据库

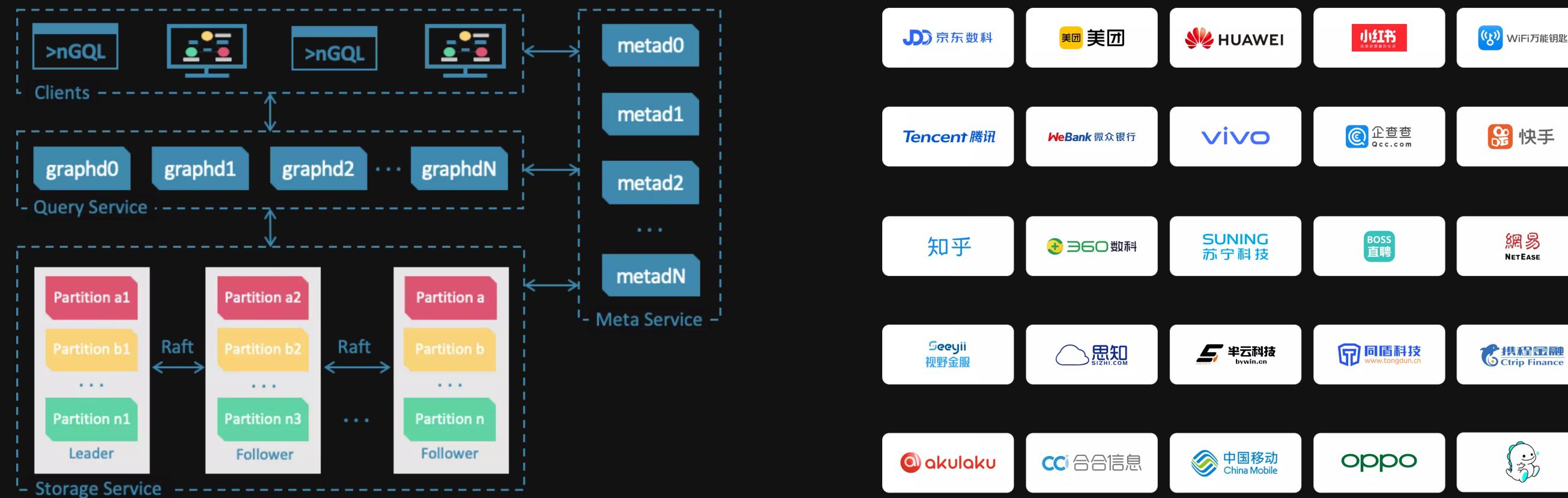
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Nebula Graph 介绍

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世界上唯一能够容纳千亿顶点和万亿条边，并提供毫秒级查询延时的图数据库解决方案



了解更多 >>>

文档: [Nebula 架构](#)

官网: [用户案例](#)



微信



众安保险



网易游戏



Soul



Ziroom自如



视野金服



思知



华云科技



同盾科技



携程金融



akulaku



合合信息



中国移动



OPPO



美团



京东数科



HUAWEI



小红书



WiFi万能钥匙



Tencent 腾讯



WeBank 微众银行



vivo



企查查



快手



知乎



360 数科



SUNING 苏宁科技



Boss 直聘



网易



Geeyii 视野金服



Sizhi



华云科技



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akulaku



CCi



中国移动



OPPO

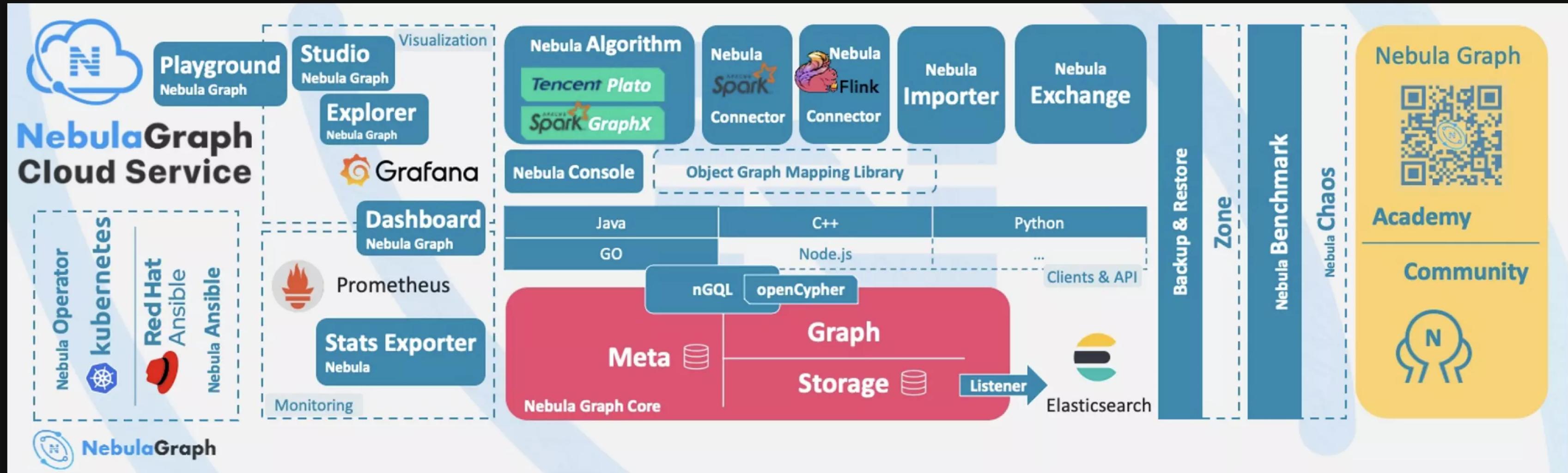


美团

Nebula Landscape

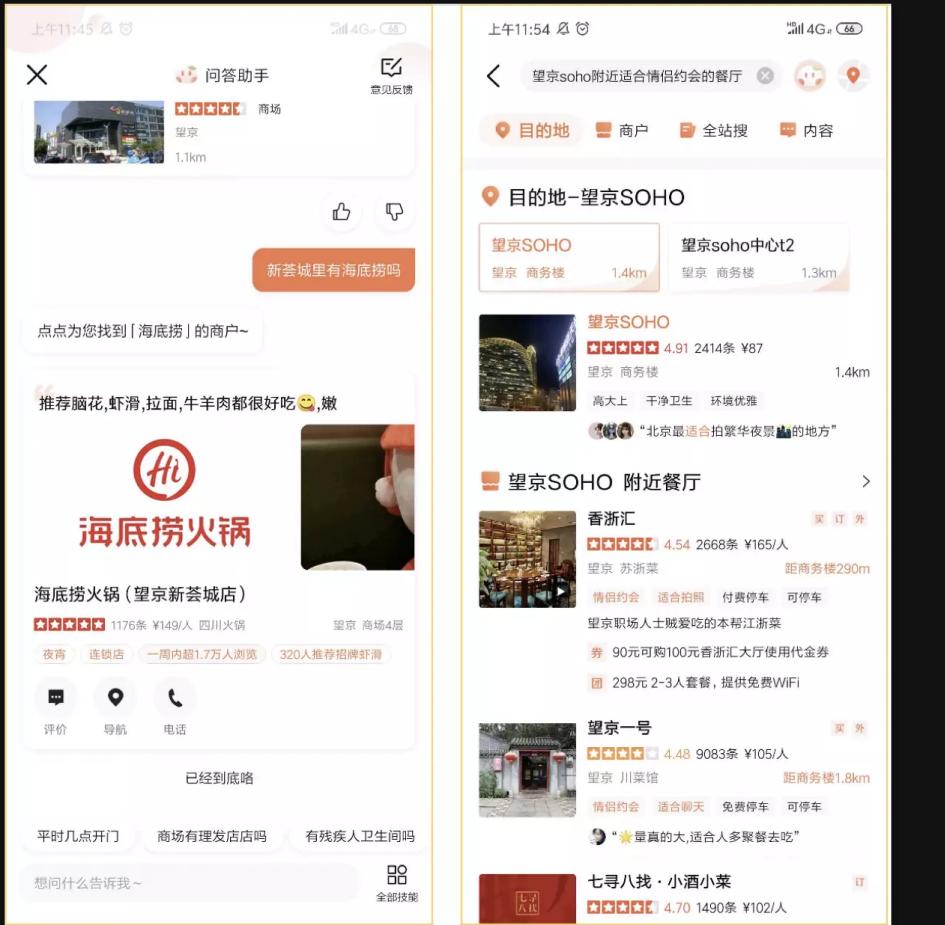
Nebula 社区生态非常丰富，并且还在日益拓展，欢迎同学们了解、参与贡献。

- Deployment, Monitoring
- Data Visualization
- Algorithm, Analytic
- Clients, Connectors, ETL

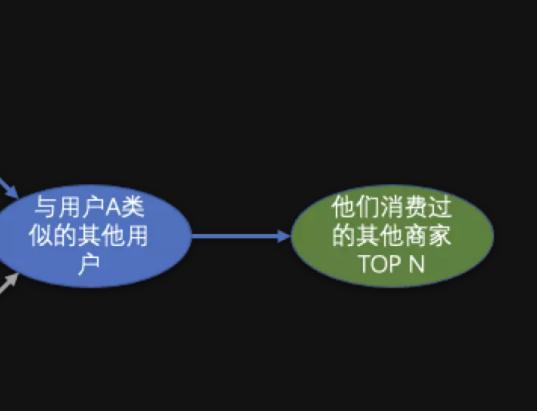
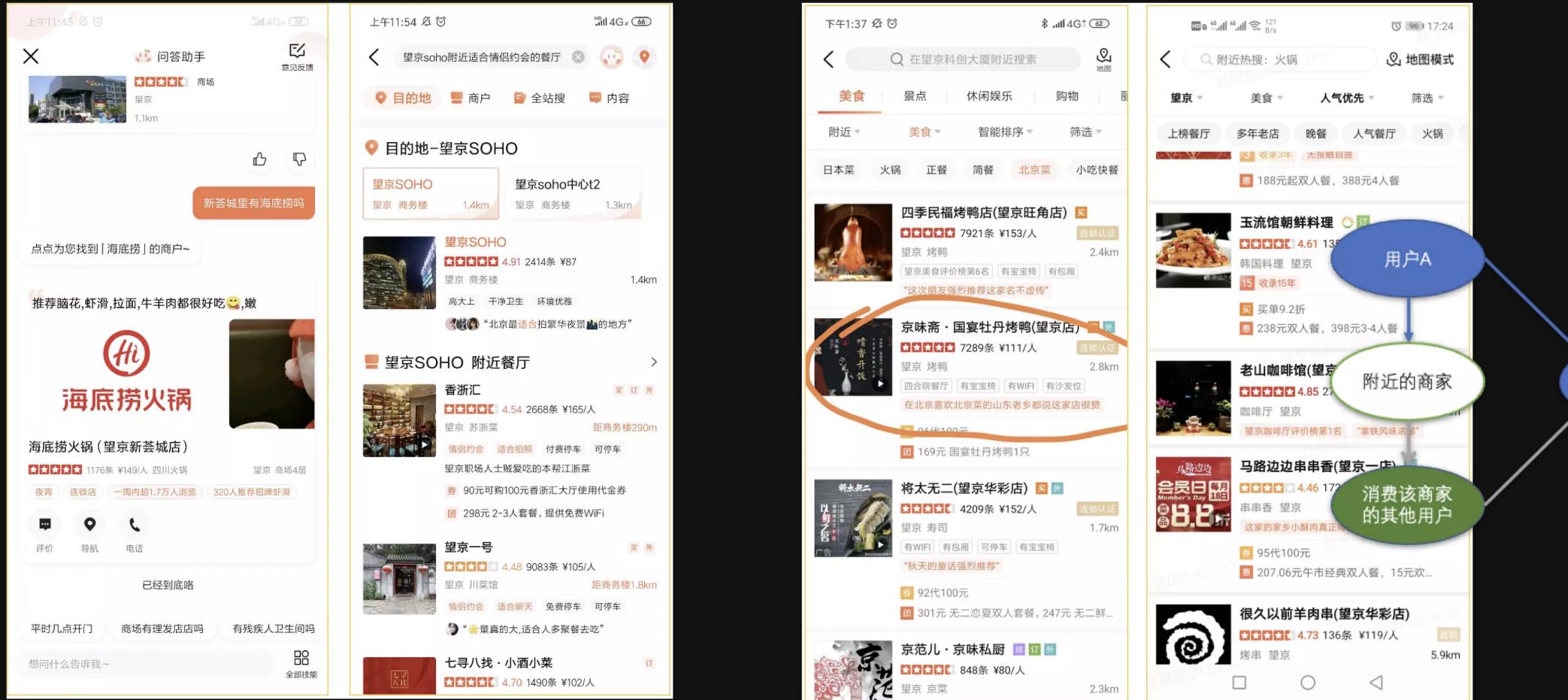


图数据库的应用场景

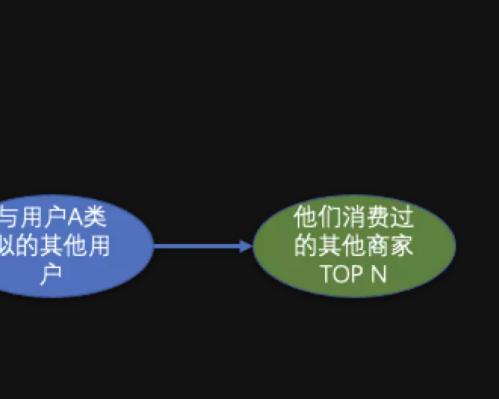
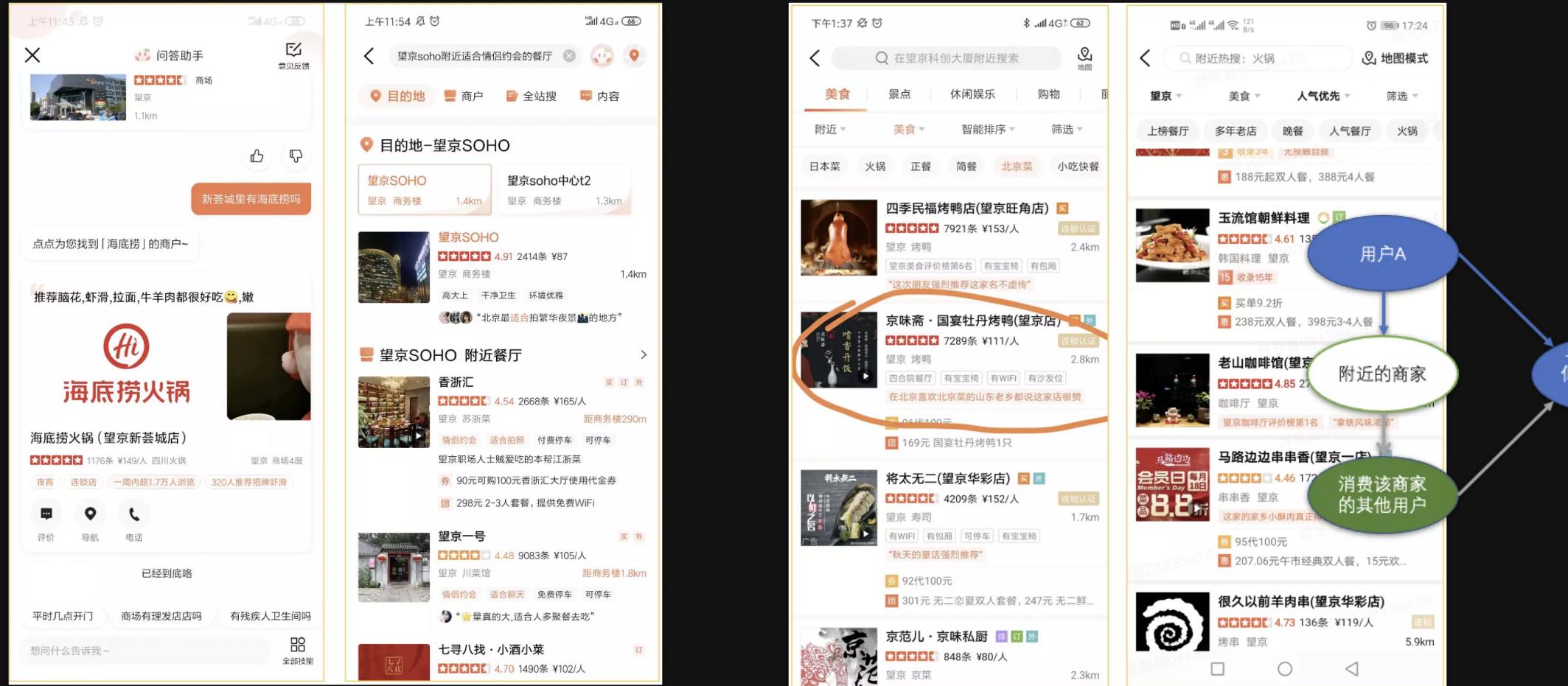
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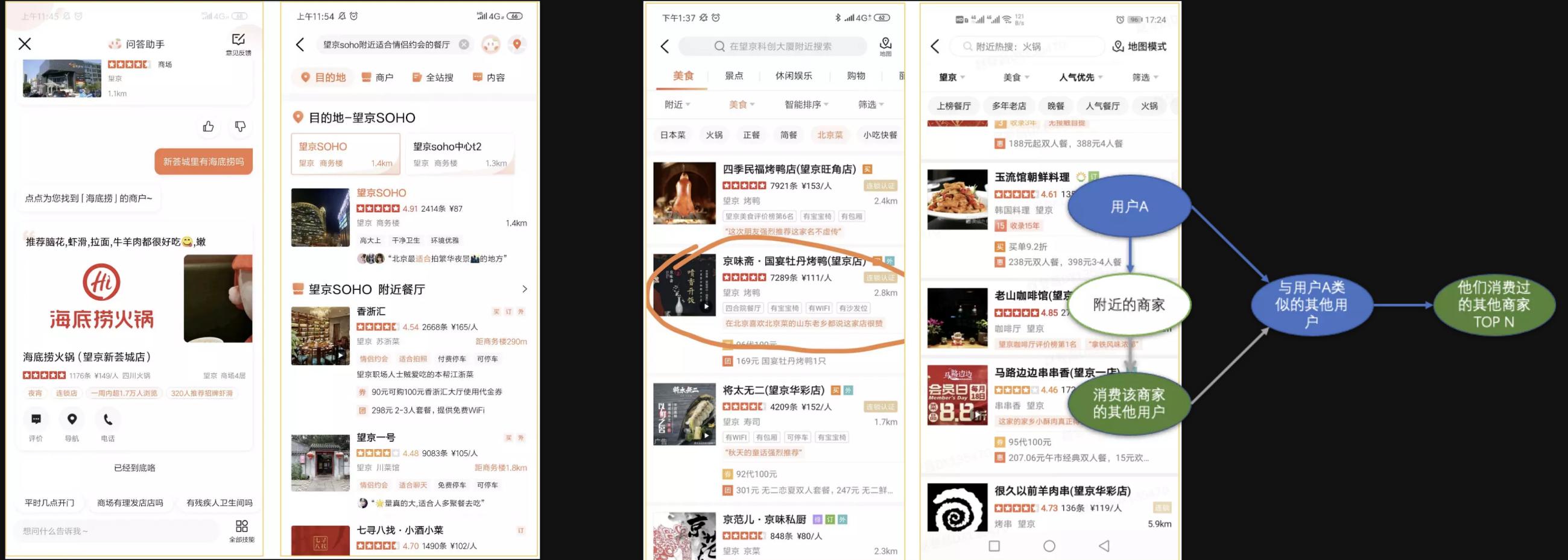
图数据库的应用场景



图数据库的应用场景



图数据库的应用场景



典型场景

社交网络

风险控制

公共安全

知识图谱

机器学习

生化制药

物联网

区块链

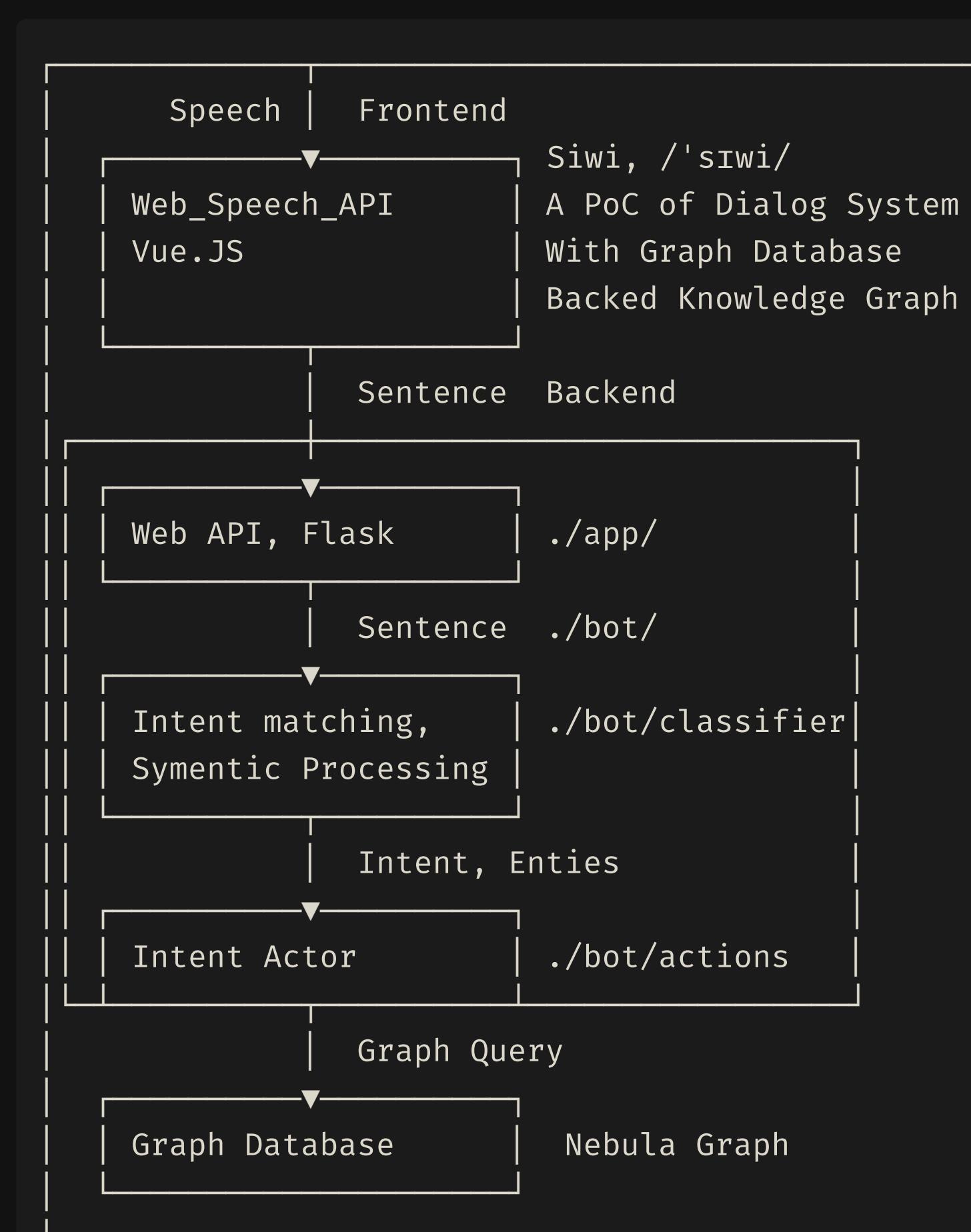
数据血缘

智能运维

Introducing Siwi

Siwi (/sIwi/) is a PoC of Dialog System With Graph Database Backed Knowledge Graph.

Arch of Siwi



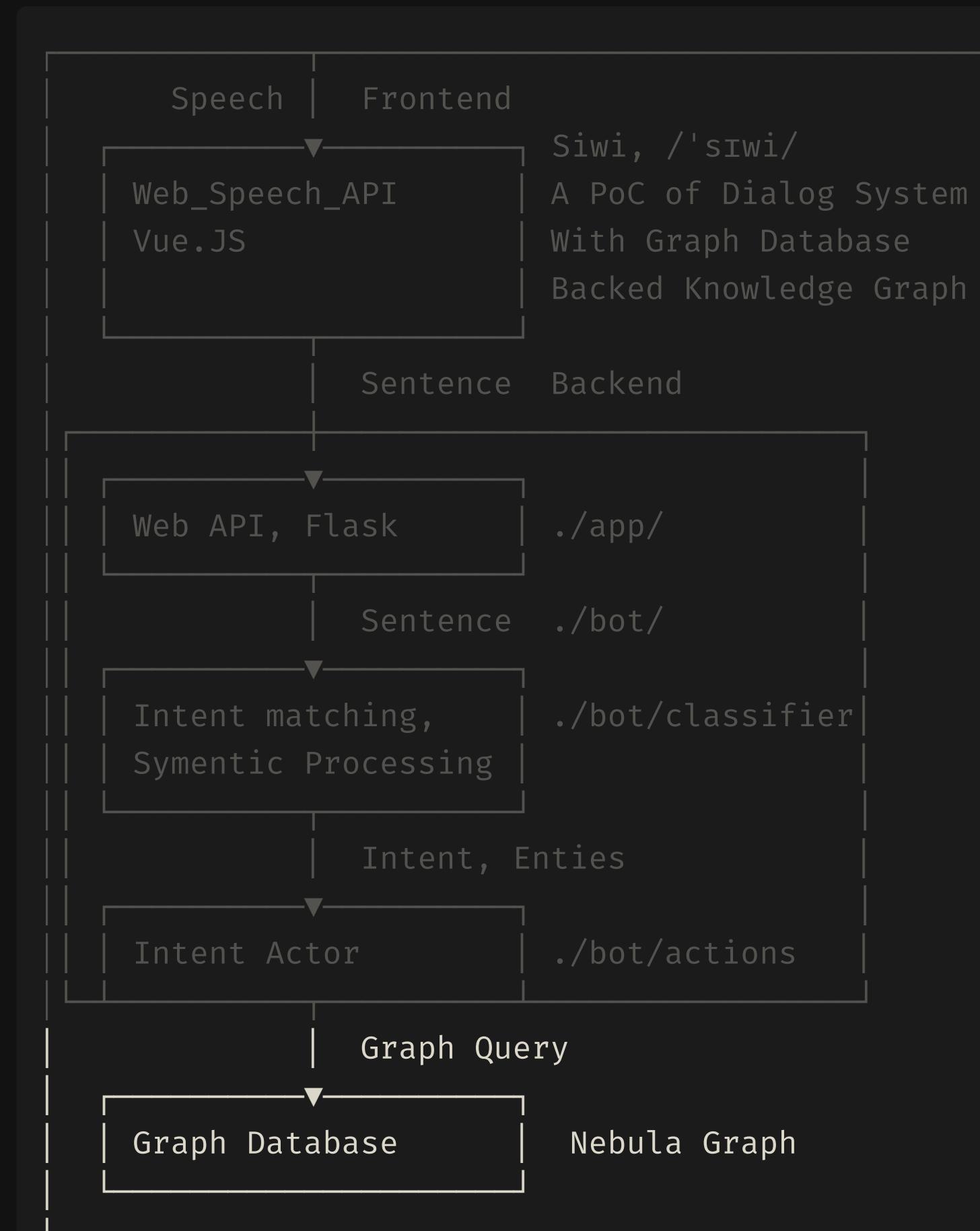
Code Structure

```
.
├── README.md
└── src
    ├── siwi
    │   ├── app
    │   ├── bot
    │   │   ├── actions
    │   │   ├── bot
    │   │   ├── classifier
    │   │   └── test
    │   └── siwi_frontend
    │       ├── README.md
    │       ├── package.json
    │       └── src
    │           ├── App.vue
    │           └── main.js
    └── wsgi.py
```



[wey-gu/nebula-siwi](https://github.com/wey-gu/nebula-siwi)

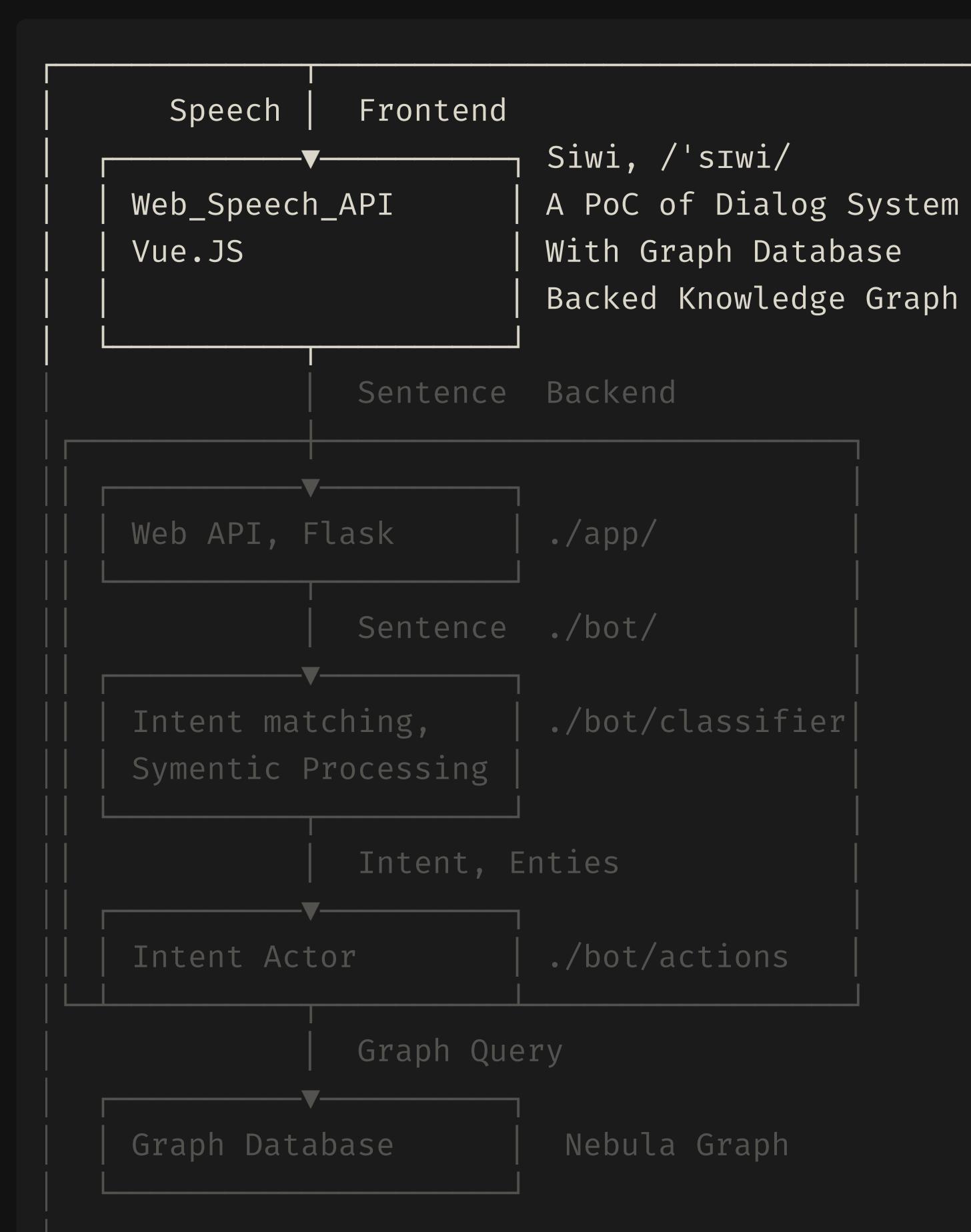
Arch of Siwi



Code Structure

```
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├── README.md
└── src
    ├── siwi
    │   # Siwi-API Backend
    │   ├── app
    │   │   # Web Server, take HTTP req > call
    │   │   └── bot
    │   │       # Bot API
    │   │       ├── actions
    │   │       │   # Take Intent, Slots, Query KG here
    │   │       └── bot
    │   │           # Entrypoint of the Bot API
    │   │           └── classifier
    │   │               # Symentic Parse, Intent Match, etc
    │   │               └── test
    │   │                   # Example Data as equivalent/mock
    │   └── siwi_frontend
    │       # Browser End
    │       ├── README.md
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    │       └── src
    │           ├── App.vue
    │           │   # Listen to user and pass Qs to bot
    │           └── main.js
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Arch of Siwi



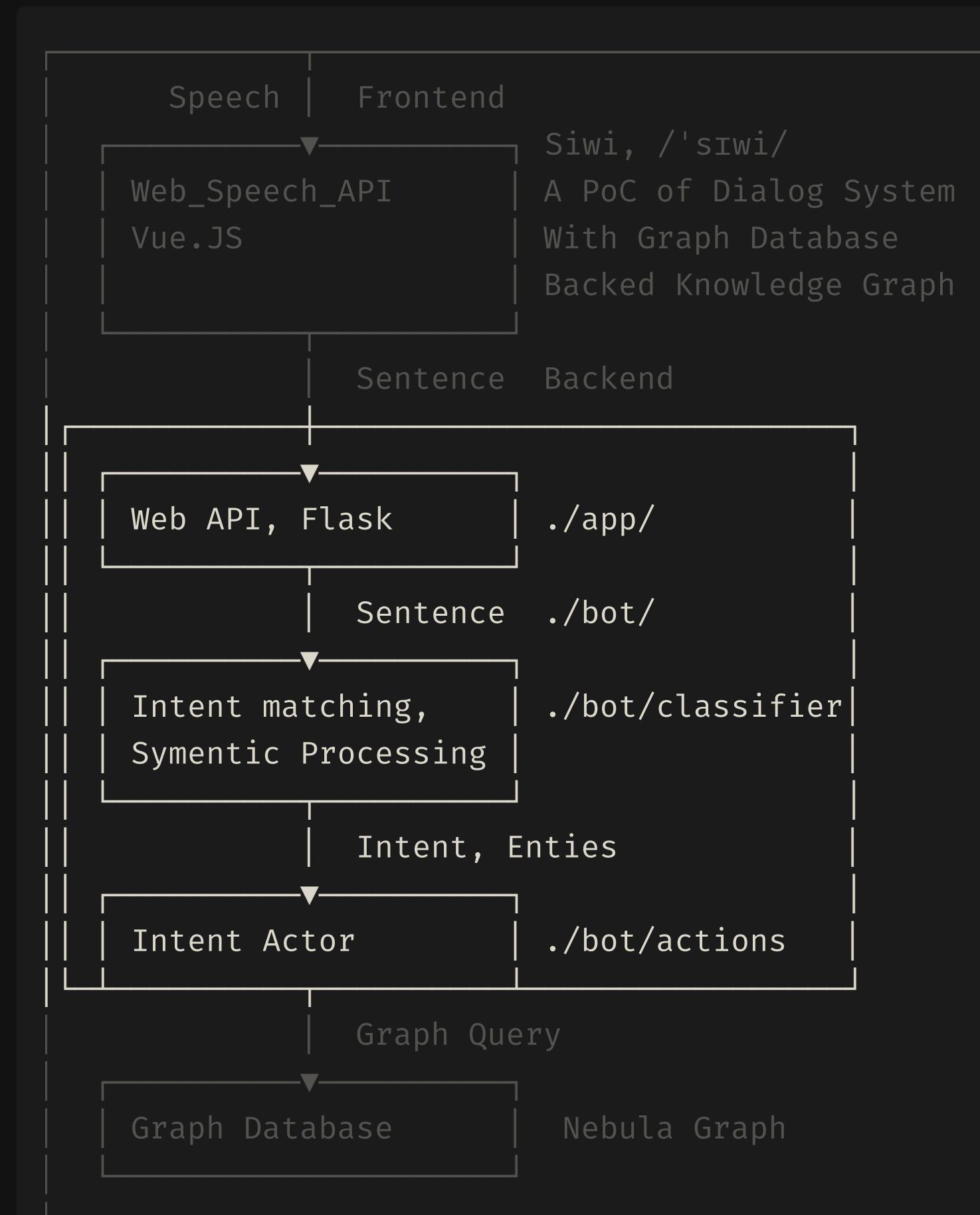
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[wey-gu/nebula-siwi](https://github.com/wey-gu/nebula-siwi)

Arch of Siwi



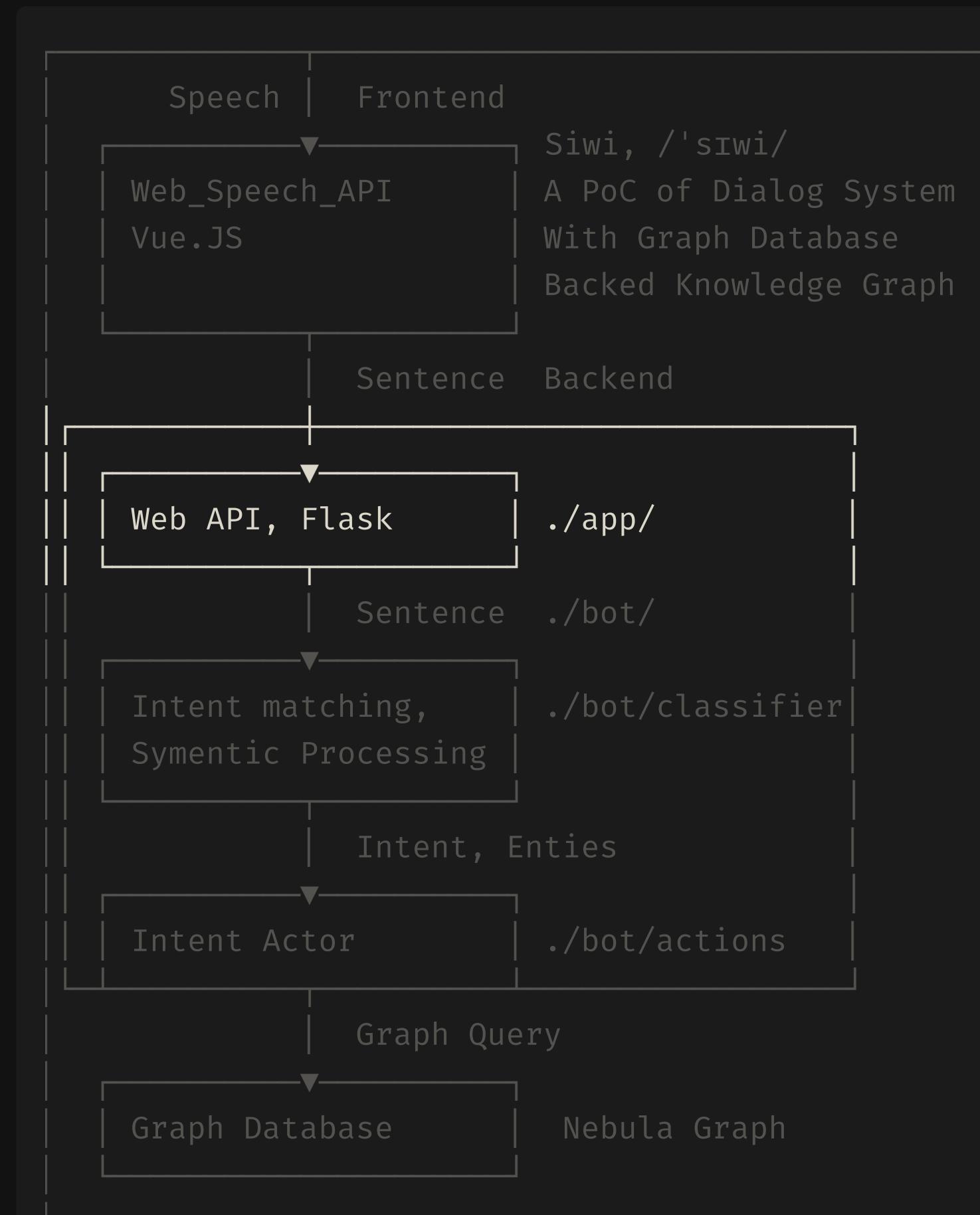
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Arch of Siwi



Code Structure

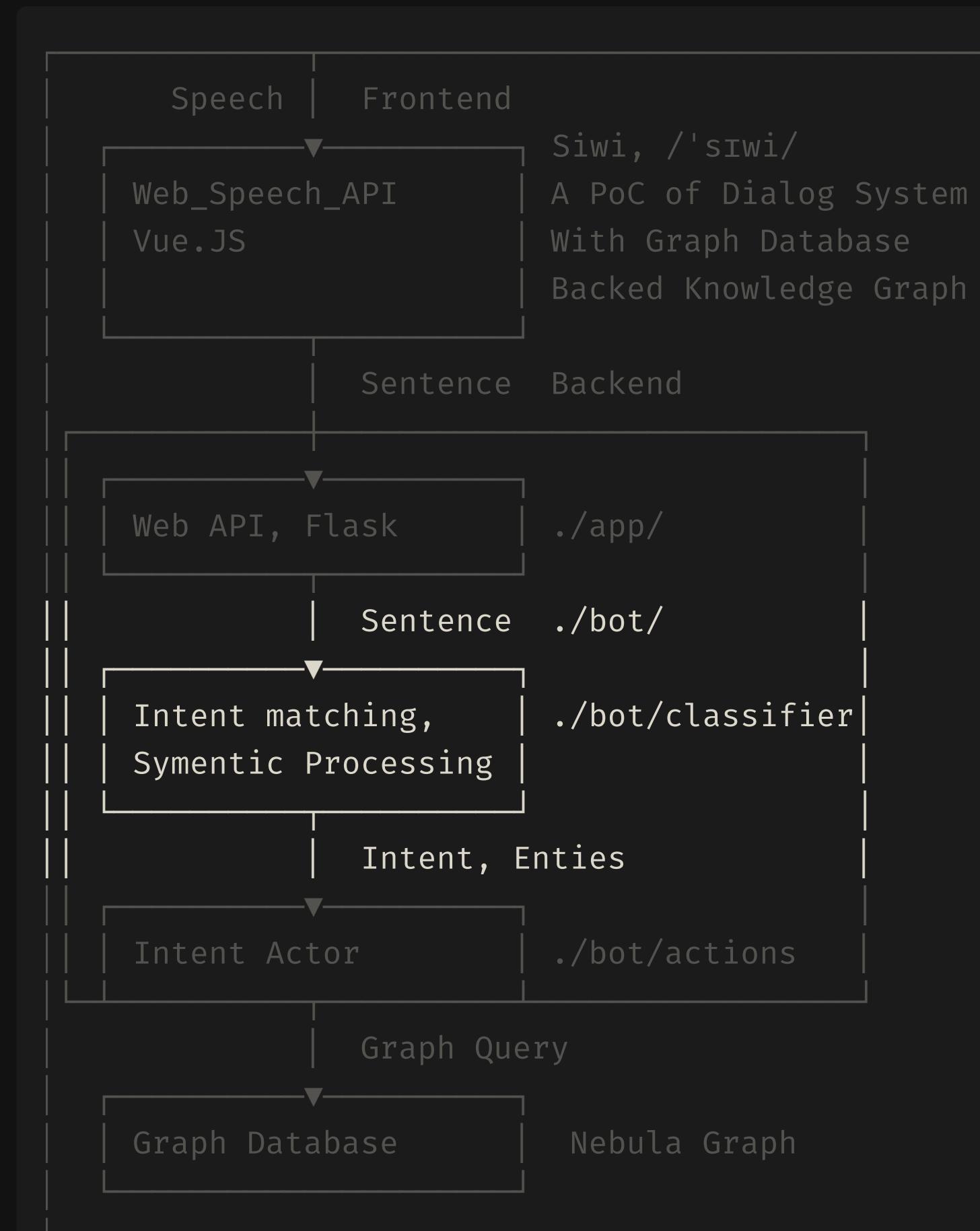
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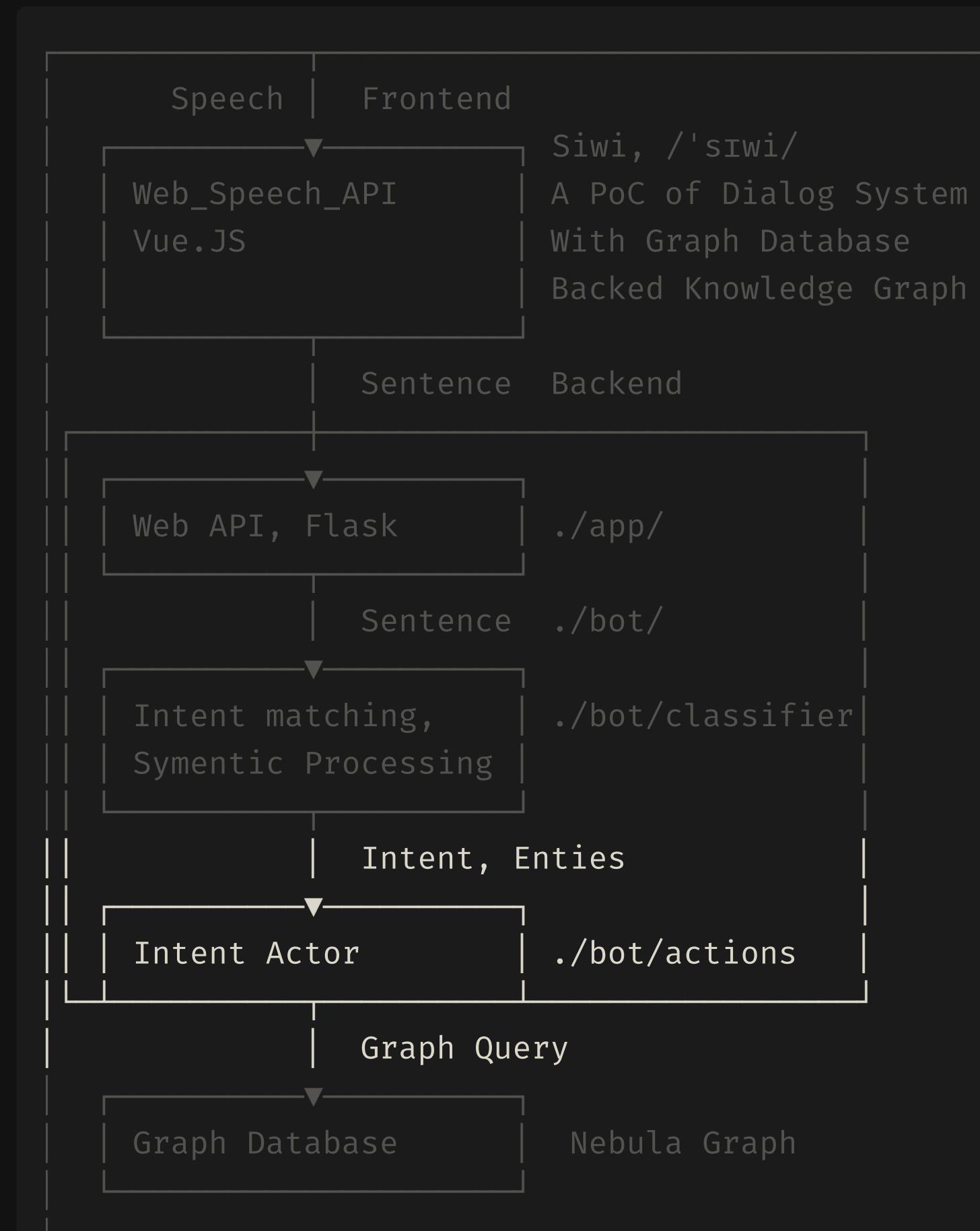
Arch of Siwi



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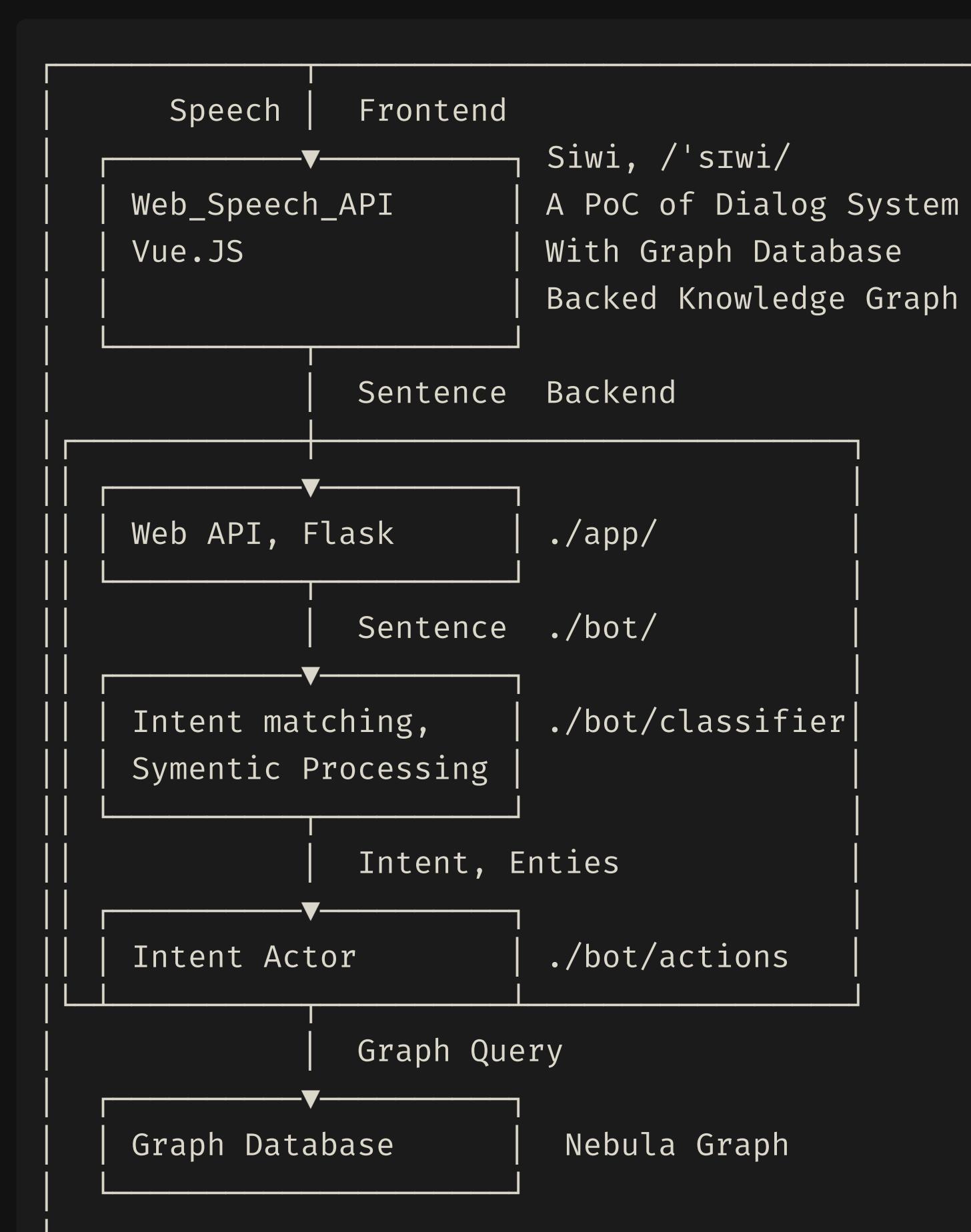
Arch of Siwi



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Arch of Siwi



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[wey-gu/nebula-siwi](https://github.com/wey-gu/nebula-siwi)

Live Demo 0

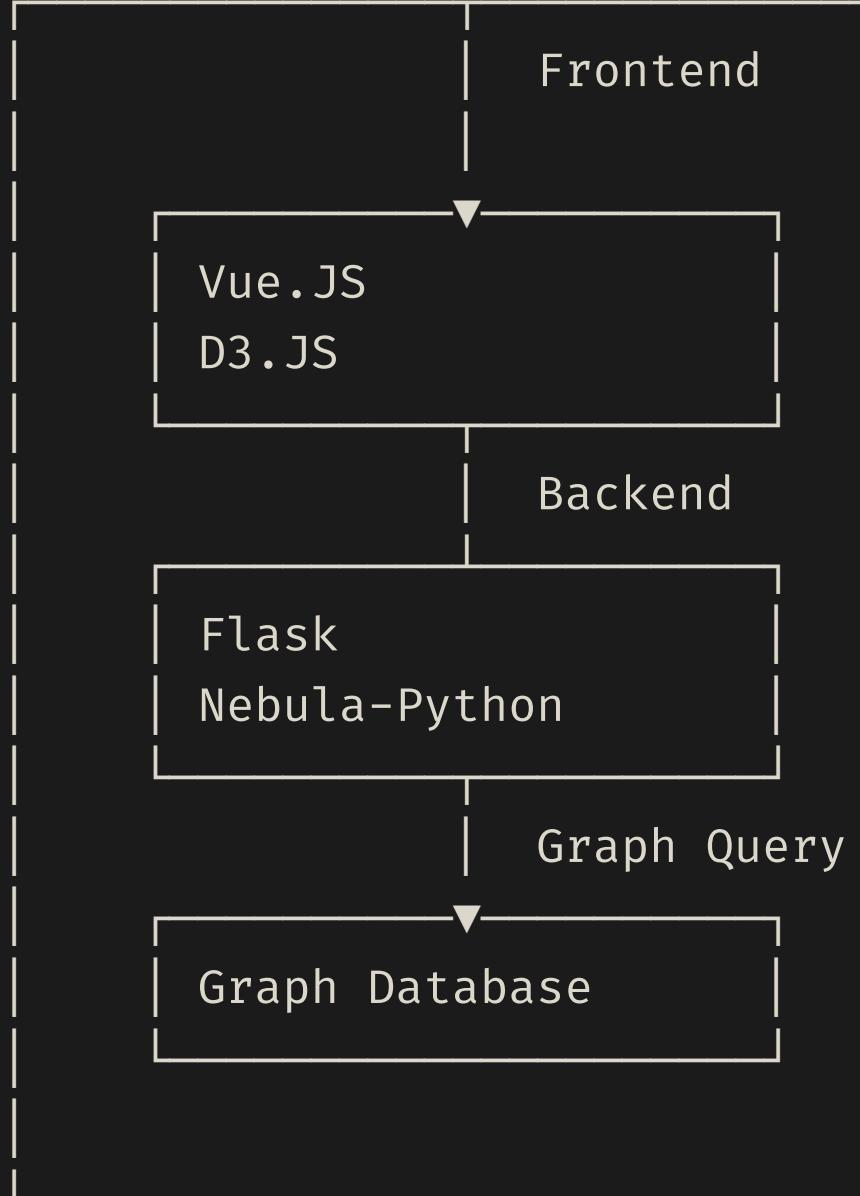
Siwi on K8s

siwei.io/learn/nebula-101-siwi-kgqa

Corp-Rel-Search 企业关系图谱、股权穿透系统

Corp-Rel-Search is a PoC of Corporation Relationship Knowledge Graph System on top of Nebula Graph.

Arch of Corp-Rel-Search



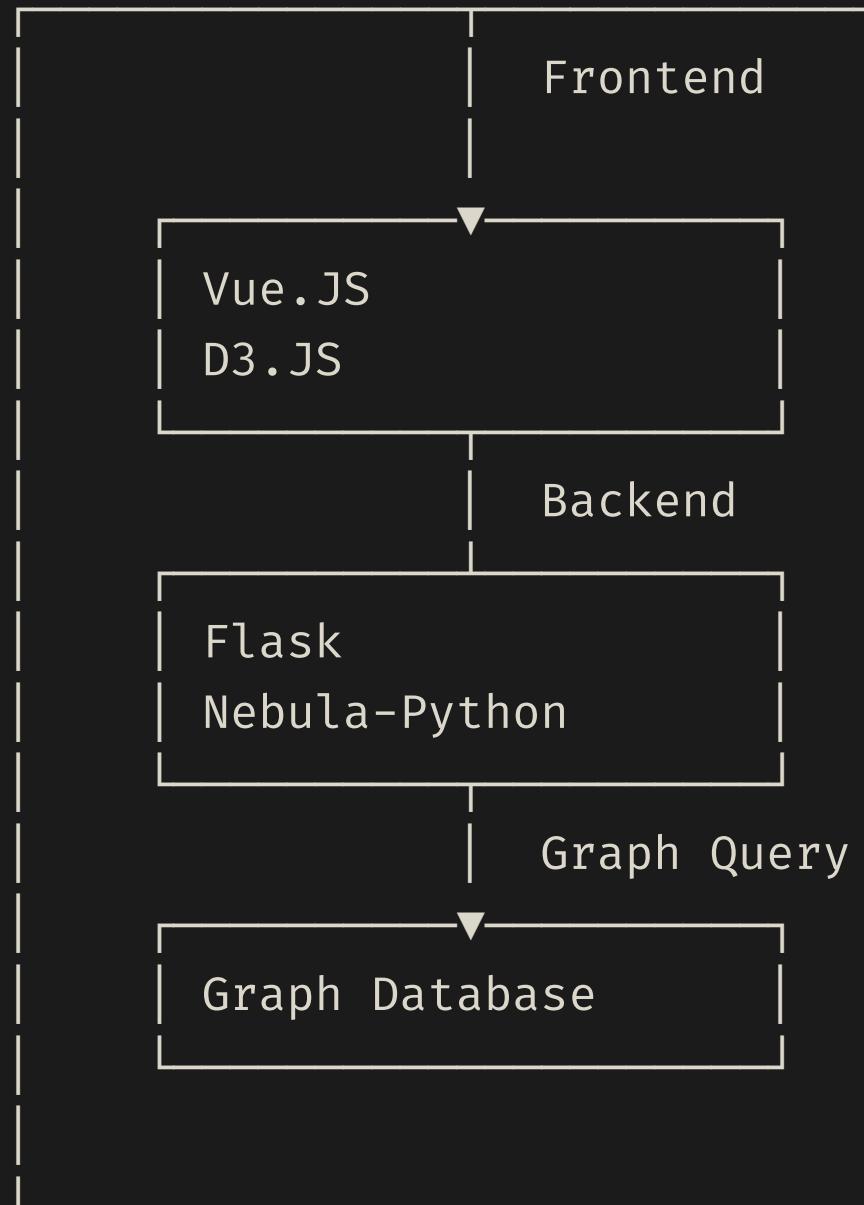
The Code

```
├── README.md      # You could find Design Logs here
├── corp-rel-backend
│   └── app.py      # Flask App to handle Request and call
├── corp-rel-frontend
│   └── src
│       ├── App.vue
│       └── main.js    # Vue App to call Flask App and Render
└── requirements.txt
```

```
@app.route("/api", methods=["POST"])
def api():
    entity = request.get_json().get("entity", "")
    if entity:
        resp = query_shareholding(entity)
        data = make_graph_response(resp)
        #
    return jsonify(data)

def query_shareholding(entity):
    query_string = (
        f"MATCH p=(v)-[e:hold_share|:is_branch_of|:relative"
        f"WHERE id(v) IN [{entity}] RETURN p LIMIT 100"
    )
    session = connection_pool.get_session('root', 'nebula')
    resp = session.execute(query_string)
    return resp
```

Arch of Corp-Rel-Search



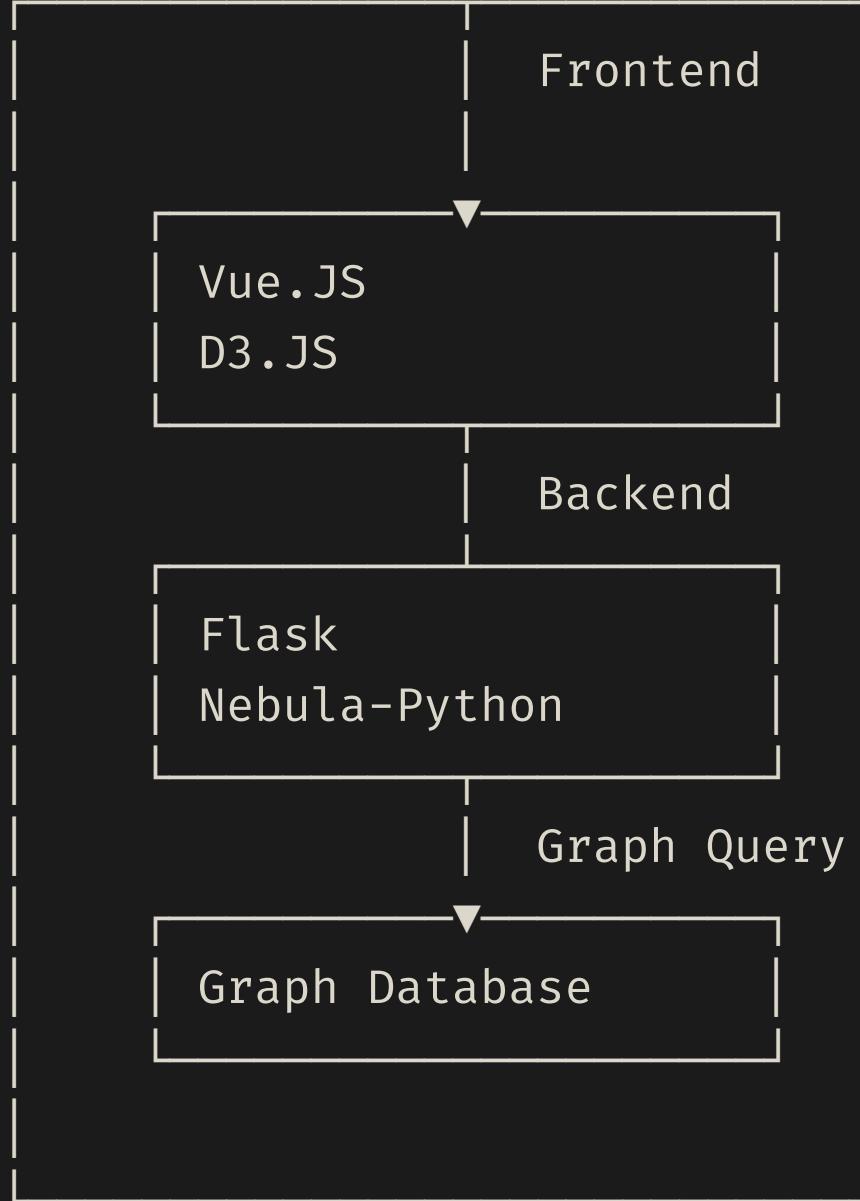
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Arch of Corp-Rel-Search



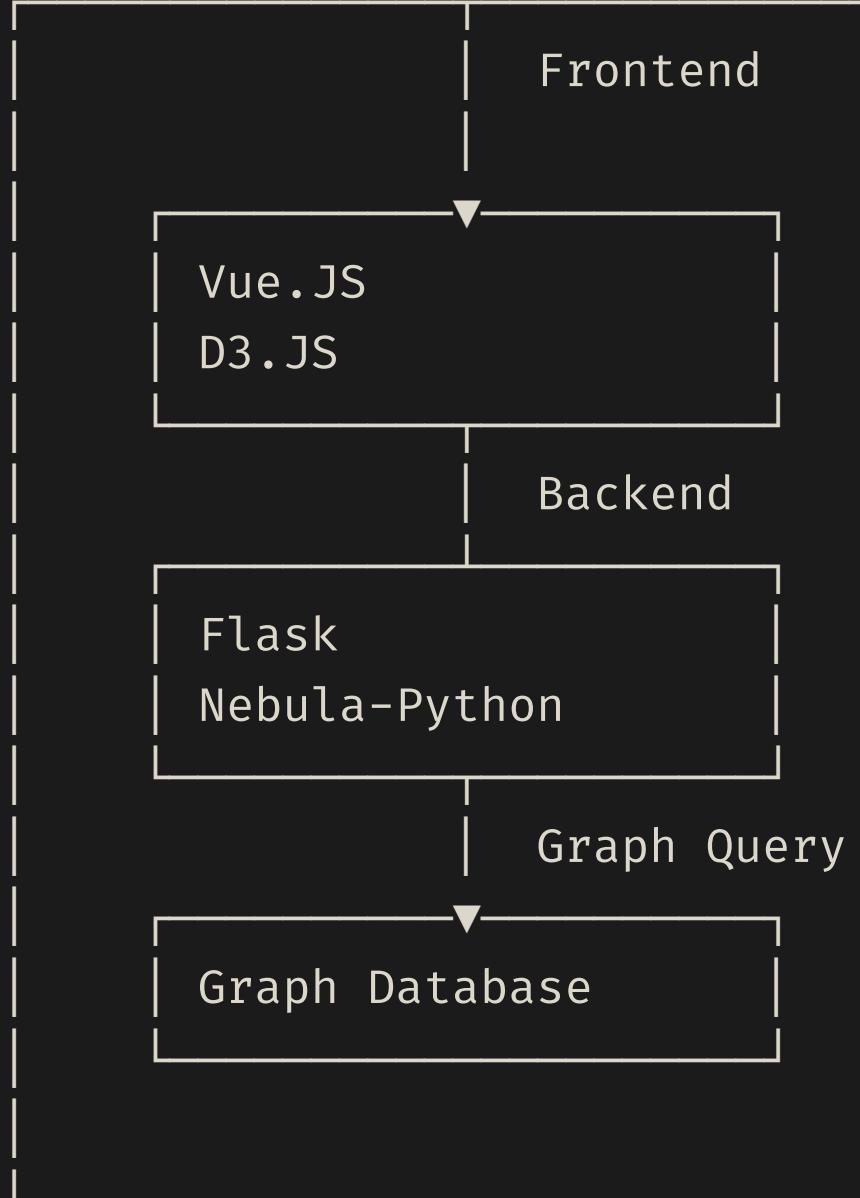
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Arch of Corp-Rel-Search



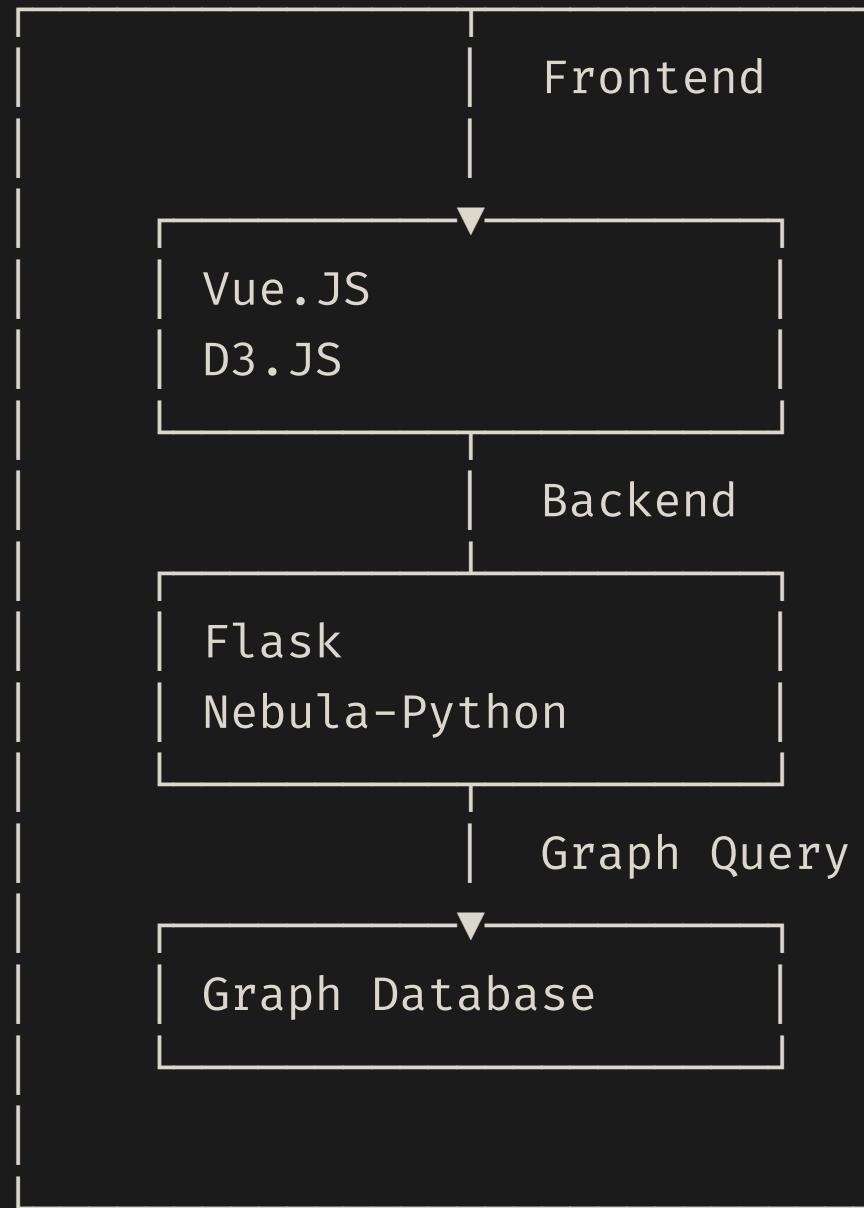
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Arch of Corp-Rel-Search



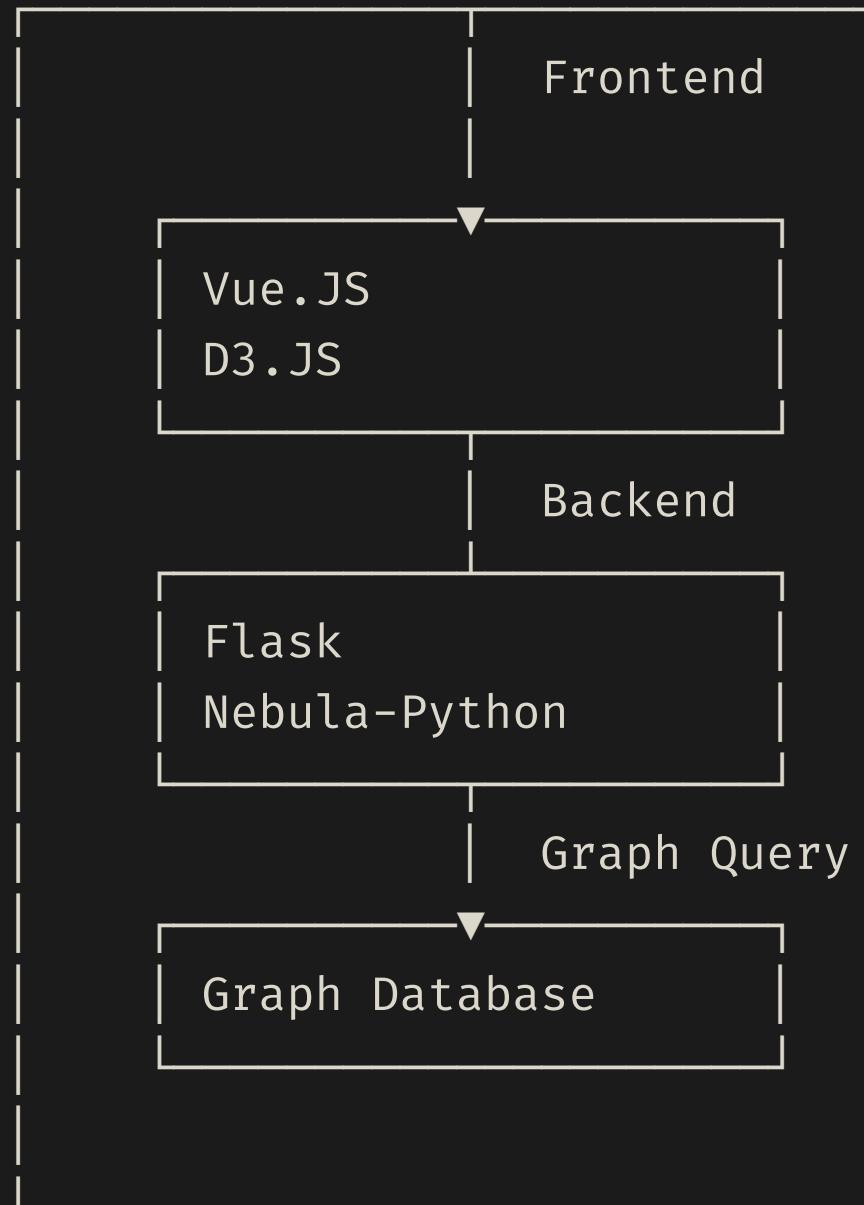
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Arch of Corp-Rel-Search



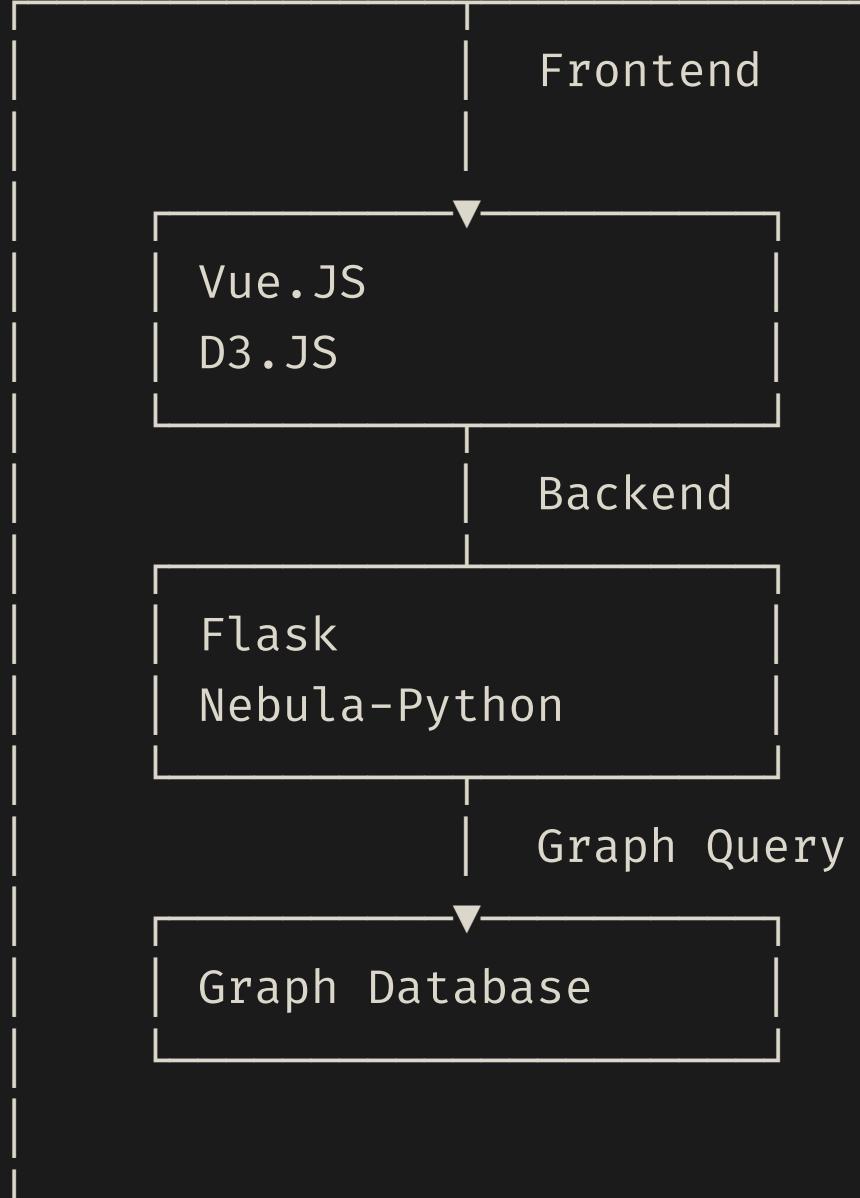
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        # ...
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def query_shareholding(entity):
    query_string = (
        f"MATCH p=(v)-[e:hold_share|:is_branch_of|:relative"
        f"WHERE id(v) IN [{entity}] RETURN p LIMIT 100"
    )
    session = connection_pool.get_session('root', 'nebula')
    resp = session.execute(query_string)
    return resp
```

Arch of Corp-Rel-Search



The Code

```
├── README.md      # You could find Design Logs here
├── corp-rel-backend
│   └── app.py      # Flask App to handle Request and call
├── corp-rel-frontend
│   └── src
│       ├── App.vue
│       └── main.js    # Vue App to call Flask App and Render
└── requirements.txt
```

```
@app.route("/api", methods=["POST"])
def api():
    entity = request.get_json().get("entity", "")
    if entity:
        resp = query_shareholding(entity)
        data = make_graph_response(resp)
        #
    return jsonify(data)

def query_shareholding(entity):
    query_string = (
        f"MATCH p=(v)-[e:hold_share|:is_branch_of|:relative"
        f"WHERE id(v) IN [{entity}] RETURN p LIMIT 100"
    )
    session = connection_pool.get_session('root', 'nebula')
    resp = session.execute(query_string)
    return resp
```

Live Demo 1

Py-Corp-Rel-Search with Nebula Graph on Docker



github.com/wey-gu/nebula-corp-rel-search

Recap

siwei.io/talks/coscon-2021



COSCon 21'
Oct. 30, 31, 2021

Recap

-  路径 - 我如何 意外地 成为了开源开发者（布道师）？

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- 🌐 Why Nebula ? - Nebula is the Magic!
- 🚀 开发者布道师是做什么的？ - Opps...忘记讲了！还是大家已经知道了？

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DA **Builds** Things with Magic, and **Scale** the Magic by helping others

开发者布道师用魔法[创造], 并把魔法传授给别人, [帮助]大家成为魔法师



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THANK YOU

QUESTIONS?

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