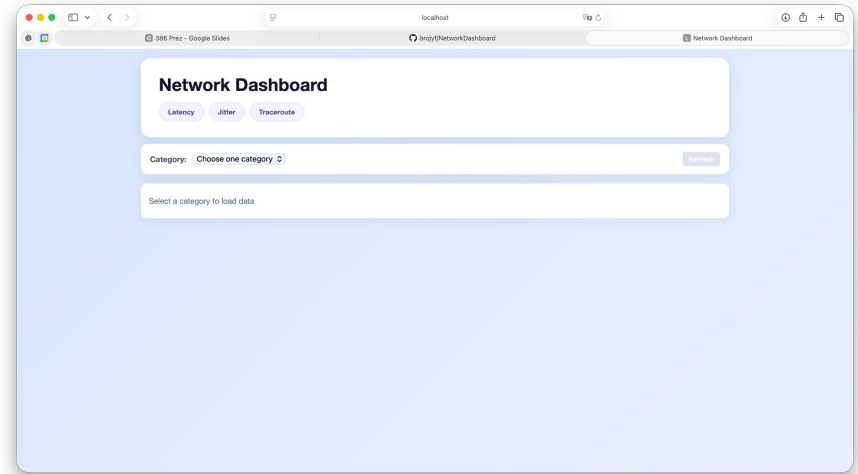


Network Dashboard

ByteForge(Patrick) CS386 25F

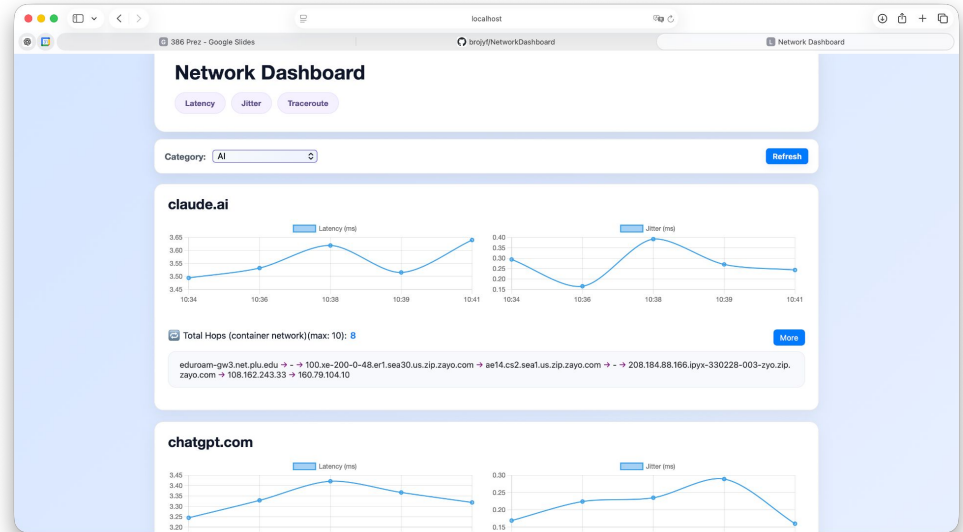
Introduction

- Web-based visualization for network performance
- Monitors latency, jitter, and routing paths

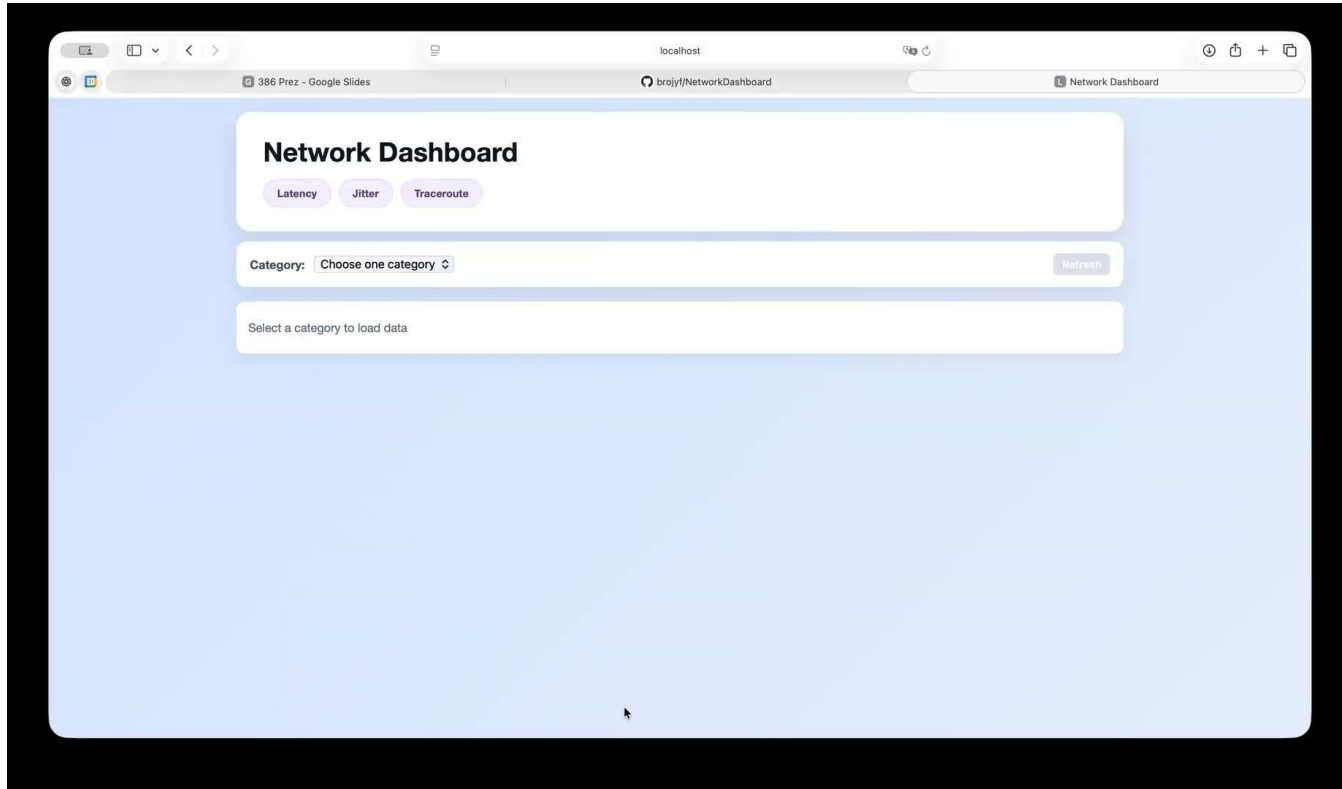


Outline

- Demo
- Background
- Architecture Diagram
- Sequence Diagram
- Class Diagram
- Chanllegens
- References
- Questions

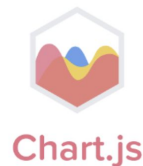
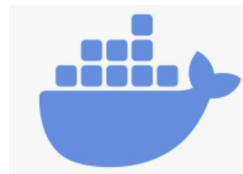
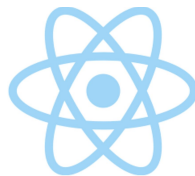
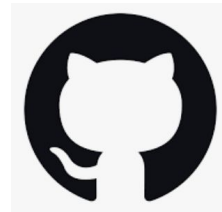
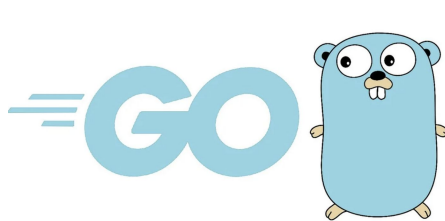


Demo

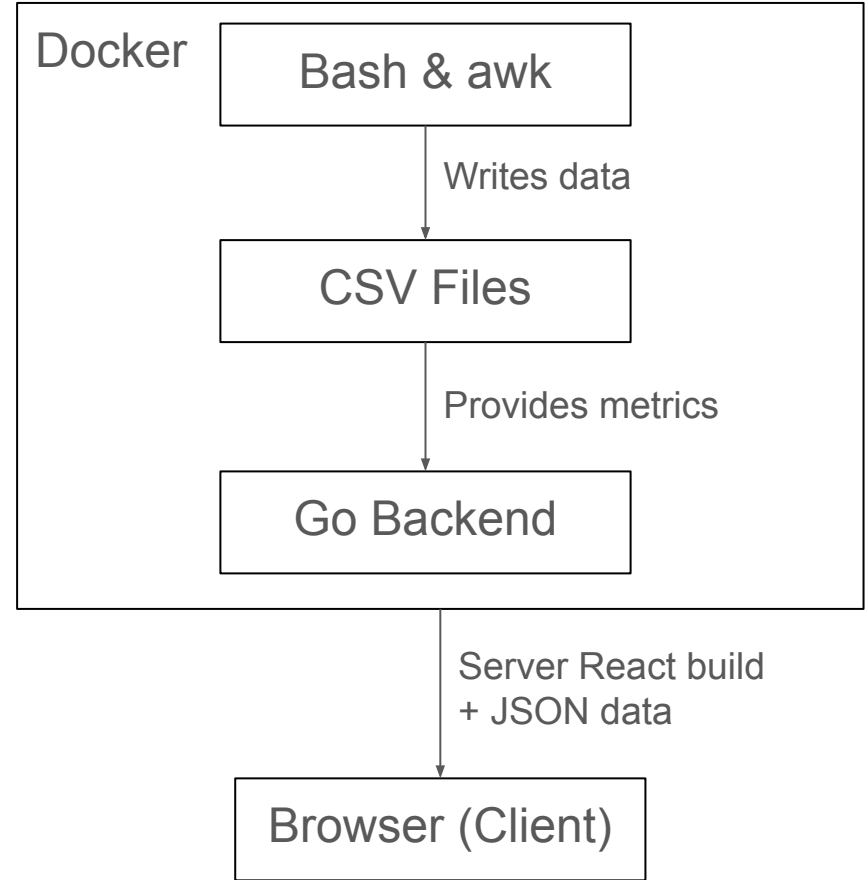


Background

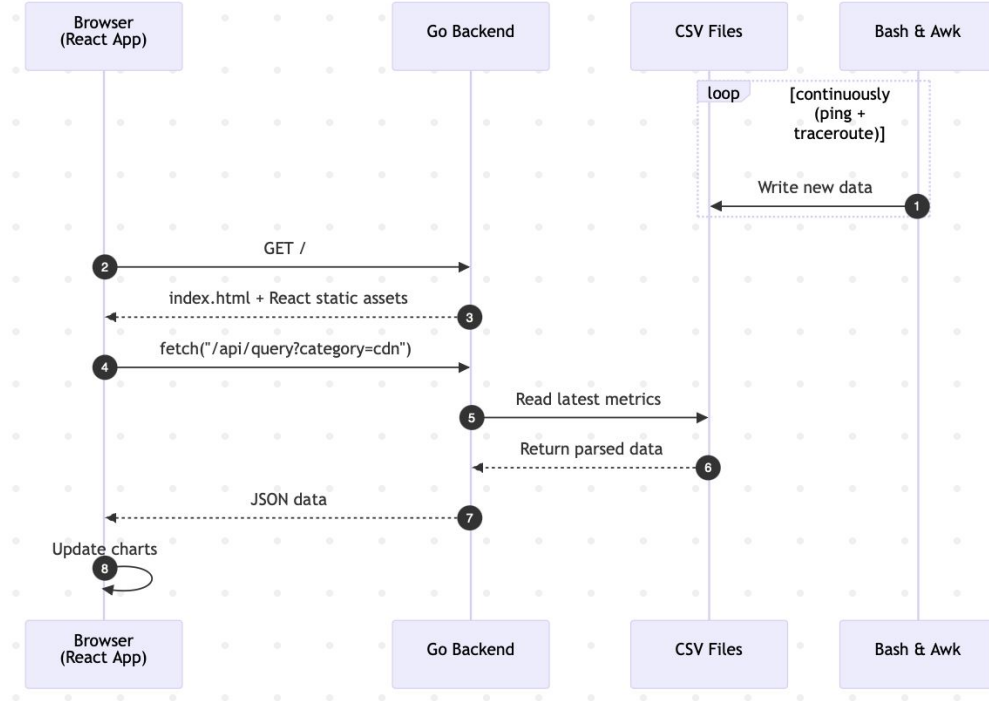
- Golang (Gin framework)
- Bash & awk
- React & Chart.js
- Docker
- GitHub



Architecture Diagram

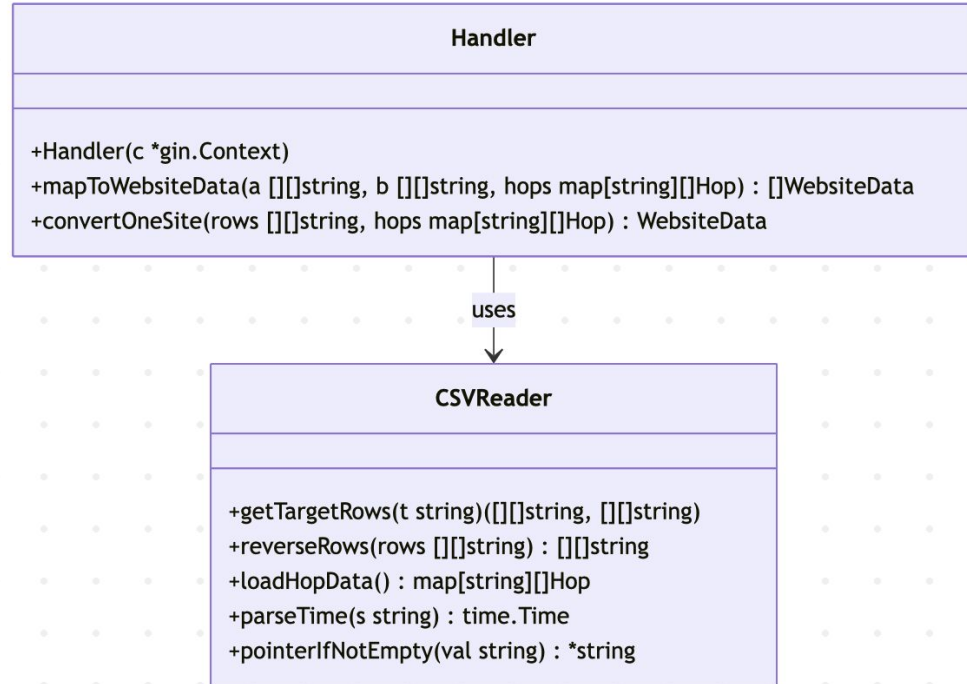


Sequence Diagram



Class Diagram

- Backend



Challenges & Future Works

- Using awk
- Tried to use websocket
 - => Too complicated/Update every minute
- Add more websites
- Allow user to enter websites

```
patj --zsh --80x24

(base) patj@patj-MacBook-Pro ~ % traceroute google.com
traceroute to google.com (142.250.217.78), 64 hops max, 40 byte packets
 1  eduroam-gw3.net.plu.edu (10.72.0.3)  2.615 ms  1.139 ms  1.032 ms
 2  * * *
 3  162.16.190.64.in-addr.arpa (64.190.16.162)  3.026 ms  2.785 ms  2.821 ms
 4  192.178.68.238 (192.178.68.238)  2.872 ms  2.900 ms
   52.144.57.141 (52.144.57.141)  2.864 ms
 5  * 108.170.255.127 (108.170.255.127)  3.608 ms
   192.178.105.41 (192.178.105.41)  2.666 ms
 6  sea09s29-in-f14.1e100.net (142.250.217.78)  2.943 ms
   216.239.56.222 (216.239.56.222)  3.337 ms
   142.251.55.202 (142.251.55.202)  2.846 ms
(base) patj@patj-MacBook-Pro ~ %
```

```
patj --zsh --80x24

(base) patj@patj-MacBook-Pro ~ % ping -c 4 google.com
PING google.com (142.250.217.78): 56 data bytes
64 bytes from 142.250.217.78: icmp_seq=0 ttl=117 time=2.771 ms
64 bytes from 142.250.217.78: icmp_seq=1 ttl=117 time=2.309 ms
64 bytes from 142.250.217.78: icmp_seq=2 ttl=117 time=2.255 ms
64 bytes from 142.250.217.78: icmp_seq=3 ttl=117 time=1.798 ms

--- google.com ping statistics ---
4 packets transmitted, 4 packets received, 0.0% packet loss
round-trip min/avg/max/stddev = 1.798/2.283/2.771/0.345 ms
(base) patj@patj-MacBook-Pro ~ %
```

References

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Ookla. (2024). *Speedtest by Ookla*. <https://www.speedtest.net/>

The Linux Information Project. (2022). *Awk*. <https://www.linfo.org/awk.html>

Questions?

Thank you!