

2025.05.28.(수)

# NS3 Code Generator

: LLM 기반의 네트워크 시뮬레이션 코드 자동 생성

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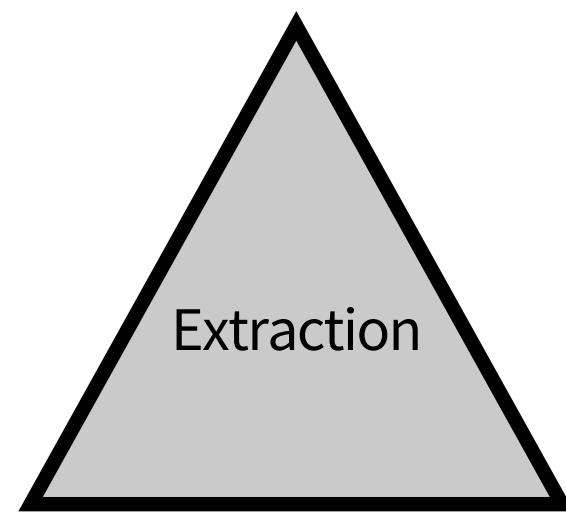
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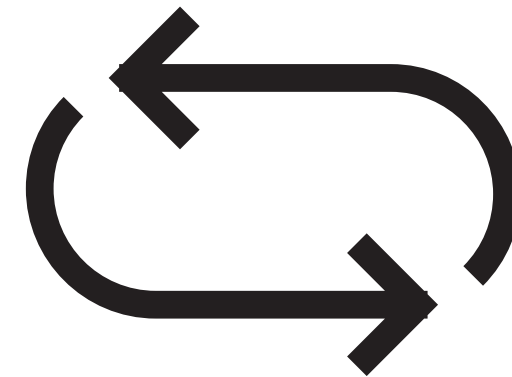
# RAG DB 구축 흐름



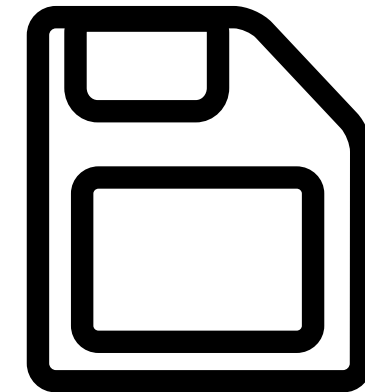
수집



추출




변환






저장

# Data Crawling (stackoverflow)

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<b>amazon-s3</b>		
51315 questions	9 asked this week, 38 this month	
<b>amazon-s3-select</b>		
92 questions	1 asked this year	
<b>python-s3fs</b>		
89 questions	4 asked this year	
<b>knox-amazon-s3-client</b>		
87 questions		
<b>amazon-s3-access-points</b>		
25 questions	2 asked this year	
<b>gns3</b>		
19 questions	11 asked this year	
<b>amazons3client</b>		
4 questions	3 asked this year	
<b>gatsby-plugin-s3</b>		
1 question		

- stackoverflow 웹사이트에서 `ns-3` 태그로 분류된 게시물 수집
- 질문-답변 형태의 데이터를 JSON 형식으로 저장

# Data Crawling (stackoverflow)

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ns-3 (Network Simulator 3) is a event driven simulator to model different types of networks.

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435 questions

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0 votes0 answers24 views

re-naming string argument of Ssid for one network is changing results in ns-3

This question is about ns-3 simulator. I have a simple Wifi network with AP and I am varying the number of STAs. No mobility yet. AP and STAs are distributed according to RowFirst in Grid...

wifins-3ssid

Ella Robinson 1asked Feb 25 at 16:08

0 votes0 answers41 views

RPL library in NS-3

I want to use RPL protocol in NS-3 simulator. I found 3 entries, but none of them answered it. 12 years ago, 2) question for NS2, 3) generic question about IoT. The gitlub entry for NS3 which I ...

ns-3rpl

George Violettas 381asked Feb 5 at 10:13

0 votes0 answers27 views

I am trying to run sample simulation of tracemetrics, But not able to run program stop at this stage

user@user-VMware-Virtual-Platform:~/tracemetrics-1.4.0\$ java -jar tracemetrics.jar Exception in thread "AWT-EventQueue-1" java.lang.NoClassDefFoundError: org/jdesktop/beansbinding/Prope...

javasimulationns-3

Tahir 39asked Feb 3 at 15:25

0 votes0 answers14 views

EDCA on ns3 simulator

I am looking for some example code to simulate EDCA on ns-3. How do we use EdcaParameterSet edcaParams and "load" it to STAs on MAC layer? ns-3 documents has :: in functions which are ...

simulatorns-3

Ella 1asked Jan 28 at 18:45

0 votes

De-AggregateObject and Change the aggregated object from a Class in ... implemented in NS2 2.0

The Overflow Blog

WBIT #8: Typescript for gut biomes

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# Data Crawling (stackoverflow)

## Crawling 방법

- stackoverflow 웹사이트에서 `ns-3` 태그로 분류된 게시물 수집
- 질문-답변 형태의 데이터를 JSON 형식으로 저장
- 질문 페이지에는 여러 개의 답변이 달릴 수 있기 때문에, 질문자가 직접 채택한 답변이 있으면, 답변을 우선적으로 수집
  - 질문자가 답변을 채택하지 않았을 때는, Stack Overflow에서 사용자들이 투표하여 가장 많은 득표(추천)를 얻은 답변을 선정
  - 답변이 없는 경우 제외

# Data Crawling (stackoverflow)

## Crawling 방법

```
1  import time
2  import json
3  import cloudscraper
4  from bs4 import BeautifulSoup
5  import re
6
7  # Configuration
8  BASE_URL = 'https://stackoverflow.com'
9  TAG = 'ns-3'
10 DELAY = 1 # Delay between requests (seconds)
11 MAX_PAGES = 30 # Number of pages to crawl (15 posts per page)
12 OUTPUT_FILE = 'ns3_qa.json'
13
14 scraper = cloudscraper.create_scraper()
15 HEADERS = {
16     'accept': 'text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp',
17     'accept-language': 'ko-KR,ko;q=0.9,en-US;q=0.8,en;q=0.7',
18     'cache-control': 'no-cache',
19     'pragma': 'no-cache',
20     'sec-ch-ua': '"Chromium";v="136", "Google Chrome";v="136", "Not.A/Brand";v="99"',
21     'sec-ch-ua-mobile': '?0',
22     'sec-ch-ua-platform': '"macOS"',
23     'sec-fetch-dest': 'document',
24     'sec-fetch-mode': 'navigate',
25     'sec-fetch-site': 'none',
26     'sec-fetch-user': '?1',
27     'upgrade-insecure-requests': '1',
28     'user-agent': 'Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML',
29     'cookie': 'prov=17412cb4-95bb-42a0-b540-b9eb92e3817f; __cflb=02DiuFA7zZL3enAQJD3AX8Zzv',
30 }
```

```
32 # Helpers
33 def slugify(title: str) -> str:
34     """Convert title to URL slug."""
35     slug = title.lower()
36     slug = re.sub(r"^[a-z0-9\s-]", "", slug)
37     slug = re.sub(r"[\s-]+", "-", slug).strip('-')
38     return slug
39
40
41 def get_question_links(page: int) -> list:
42     """Fetch question URLs from the tagged listing page."""
43     url = f"{BASE_URL}/questions/tagged/{TAG}?tab=newest&page={page}"
44     resp = scraper.get(url, headers=HEADERS)
45     resp.raise_for_status()
46     soup = BeautifulSoup(resp.text, 'html.parser')
47
48     links = []
49     for summary in soup.select('div.s-post-summary'):
50         a = summary.select_one('h3.s-post-summary--content-title a.s-link')
51         if a and a.get('href'):
52             links.append(BASE_URL + a['href'])
53     return links
```

stackoverflow.py



# Data Crawling (stackoverflow)

## Crawling 방법

stackoverflow.py

```
56 def parse_question(url: str) -> dict:
57     """Parse question page for title, body, and best answer."""
58     resp = scraper.get(url, headers=HEADERS)
59     resp.raise_for_status()
60     soup = BeautifulSoup(resp.text, 'html.parser')
61
62     # Title
63     title_tag = soup.select_one('h1 a.question-hyperlink')
64     title = title_tag.get_text(strip=True) if title_tag else ''
65
66     # Question body
67     q_body = soup.select_one('div.s-prose.js-post-body')
68     question = q_body.get_text("\n", strip=True) if q_body else ''
69
70     # Answer: accepted first, else highest-score
71     answer = ''
72     acc = soup.select_one('div.answer.js-accepted-answer')
73     if acc:
74         body = acc.select_one('div.s-prose.js-post-body')
75         answer = body.get_text("\n", strip=True) if body else ''
76     else:
77         candidates = []
78         for a_div in soup.select('div.answer'):
79             body = a_div.select_one('div.s-prose.js-post-body')
80             text = body.get_text("\n", strip=True) if body else ''
81             score_tag = a_div.select_one('div.js-vote-count')
82             try:
83                 score = int(score_tag.get_text(strip=True))
84             except:
85                 score = 0
86             candidates.append((score, text))
87         if candidates:
88             answer = max(candidates, key=lambda x: x[0])[1]
89
90     return {'url': url, 'title': title, 'question': question, 'answer': answer}
```

```
92 # Main
93 def main():
94     results = []
95     for page in range(1, MAX_PAGES + 1):
96         print(f"[Page {page}] fetching listings...")
97         try:
98             links = get_question_links(page)
99         except Exception as e:
100             print(f"Failed to fetch page {page}: {e}")
101             break
102         if not links:
103             break
104
105         for link in links:
106             print(f" -> parsing {link}")
107             try:
108                 qa = parse_question(link)
109                 # Skip unanswered questions
110                 if not qa['answer'].strip():
111                     print(f"    skipped {link} (no answer)")
112                     continue
113                 results.append(qa)
114             except Exception as e:
115                 print(f"    parse error for {link}: {e}")
116             time.sleep(DELAY)
117
118     # Save to JSON
119     with open(OUTPUT_FILE, 'w', encoding='utf-8') as f:
120         json.dump(results, f, ensure_ascii=False, indent=2)
121     print(f"Saved {len(results)} Q&A entries to {OUTPUT_FILE}")
122
123 if __name__ == '__main__':
124     main()
```



# Data Crawling (stackoverflow)

## Crawling 결과

ns3\_qa.json

```
1  [
2    {
3      "url": "https://stackoverflow.com/questions/79179369/de-aggregateobject-and-change-the-aggregated-object-from-a-class-in-c-impleme",
4      "title": "De-AggregateObject and Change the aggregated object from a Class in c++ implemented in Ns3.38",
5      "question": "I implemented Vehicle Ad-hoc Network in NS3.38 and used default Node class in NS3. also I created Cluster Object that has some",
6      "answer": "I think your goal in this question is clustering nodes and getting each cluster from node object. also each cluster has multi no",
7    },
8    {
9      "url": "https://stackoverflow.com/questions/79146271/importing-opencv-and-tensorflow-lite-into-ns-3-38",
10     "title": "Importing OpenCV and TensorFlow Lite into ns-3.38",
11     "question": "I am currently working on a project that involves using\n0penCV\nand\nTensorFlow Lite\nwithin the\nns-3.38\nsimulation environ",
12     "answer": "You're missing include headers in scratch/EDEN/node.cc.\n#include \"ns3/network-module.h\"\"",
13   },
14   {
15     "url": "https://stackoverflow.com/questions/79090343/missing-system-dependencies-for-ns3",
16     "title": "missing system dependencies for ns3",
17     "question": "I have been setting up ns-3-allinone on my WSL Python virtual environment using the in-built 'bake' tool. However during the se",
18     "answer": "Are you running bake from within your virtual environment?\nIf no, then try doing that.\nIf yes, then it could be a limitation of",
19   },
20   {
21     "url": "https://stackoverflow.com/questions/78645306/ns-3-multiple-wifi-clients-and-one-server-using-udp",
22     "title": "NS-3 Multiple WiFi clients and one server using UDP",
23     "question": "I am trying to built a ns-3 simulation with the following characteristics . I want multiple client nodes that will periodically",
24     "answer": "I don't know if its right but it seems to work I did it with UdpServer\nNS_LOG_INFO(\"Create UdpServer application on AP node.\")",
25   },
26   {
27     "url": "https://stackoverflow.com/questions/78485567/how-to-make-full-buffer-traffic-in-ns-3-lte-module",
28     "title": "How to make full-buffer traffic in NS-3 LTE-module",
29     "question": "I've already read documentation for LTE-module and EPC packets, but I don't understand how can I create full-buffer traffic. In",
30     "answer": "you can use\n\nTime interPacketInterval = MilliSeconds(1); //1ms for",
31   },
32 ]
```

**감사합니다 :)**

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