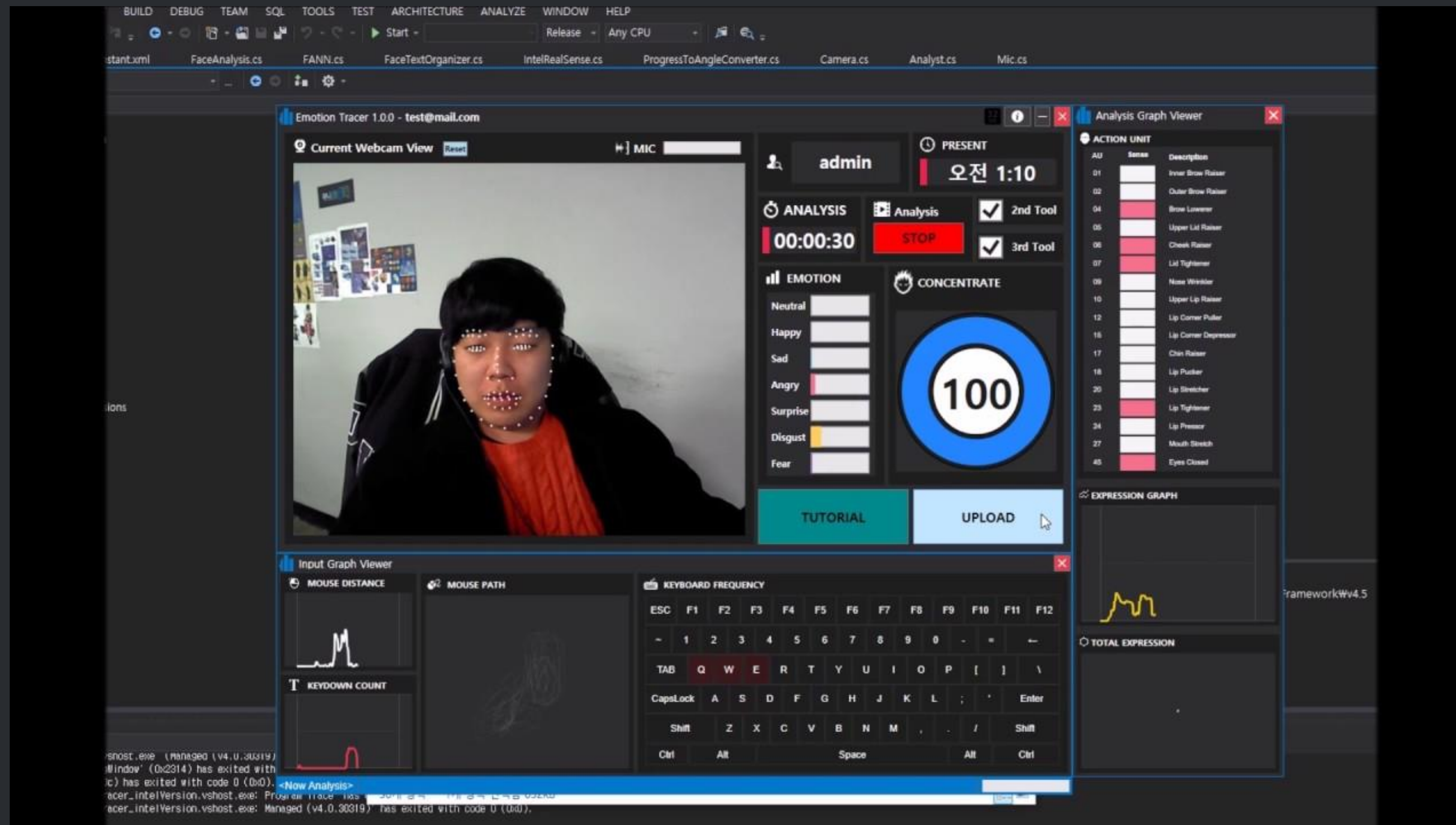


포트폴리오

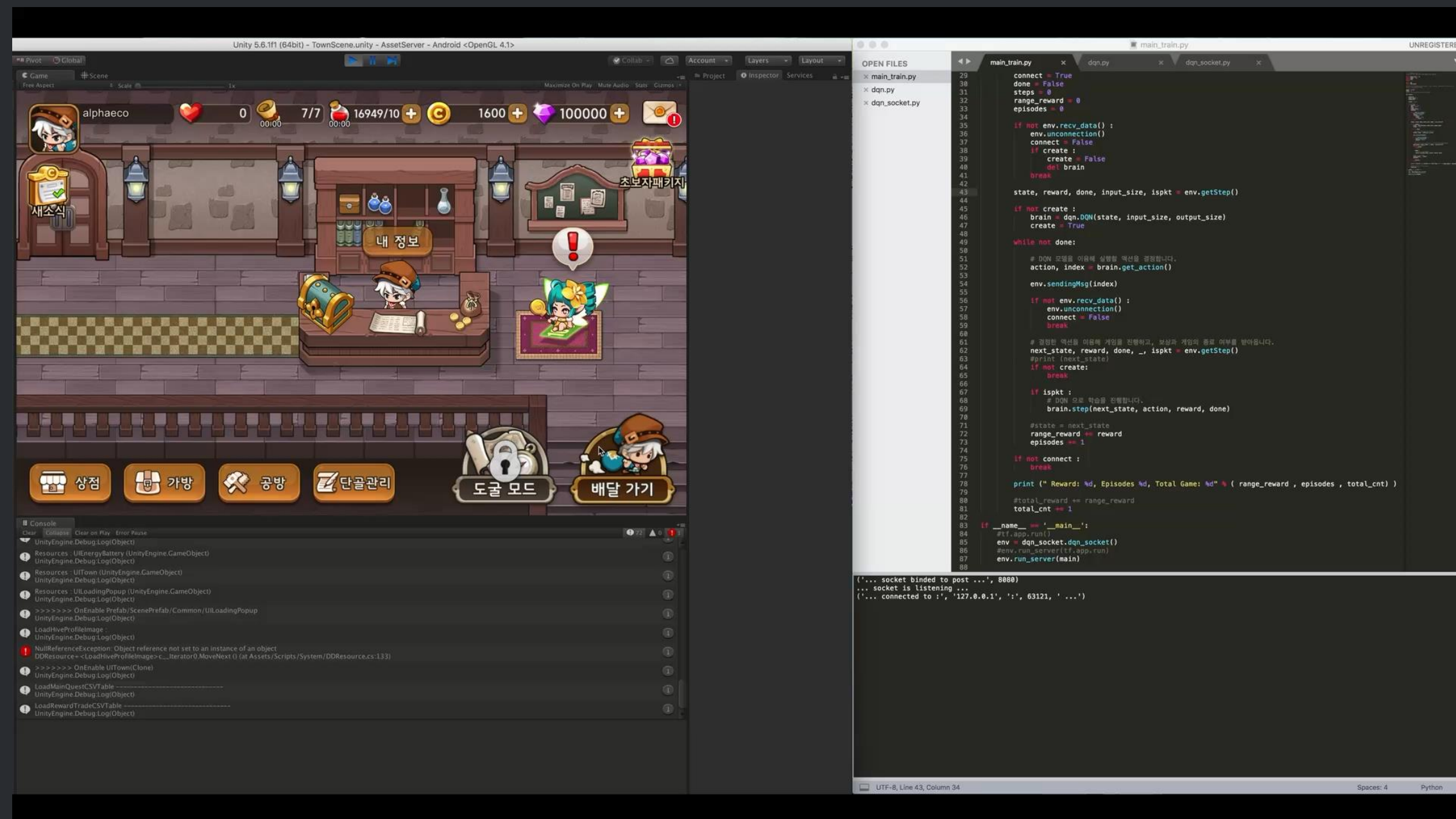
# 2017.12.26 홍익대학교 EGLab, "감성분석기술" JTBC 특허기술이전



- 얼굴 표정 분석기, Emotion Tracer
- 생체 신호 탐지기, Emotion Insole

Emotion Tracer 툴 및 GCP 기반 데이터 결과 확인 연동서비스

# 2017.07 ~ 2017.12 Com2us, “던전 딜리버리” 강화학습 에이전트 적용 테스트



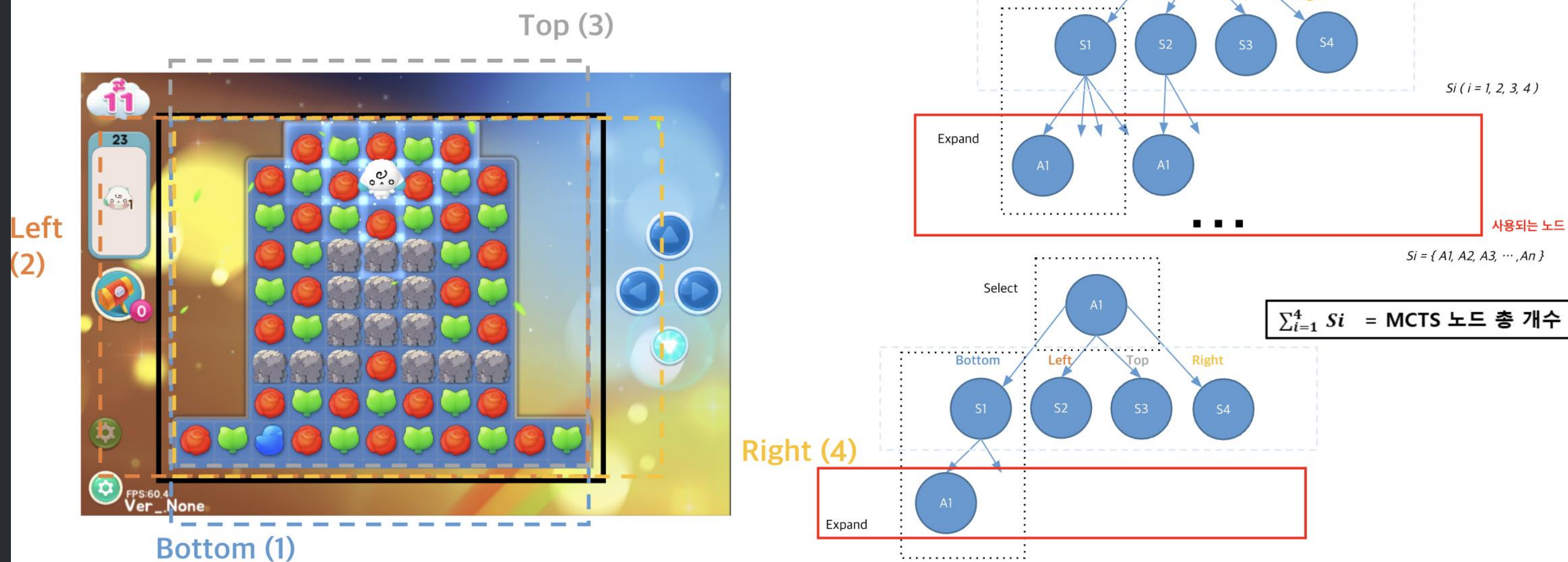
- 게임에 AI 기술 적용을 위한 탐색 및 가능성 타진
- Tensorflow로 작성된 강화학습 모델 설계 및 소켓 통신을 이용한 게임 적용
- Gridmap 을 이용한 환경정보, Action Decision을 위한 DQN 모델 적용

던전딜리버리 학습 시스템 구축 (Server-Client)



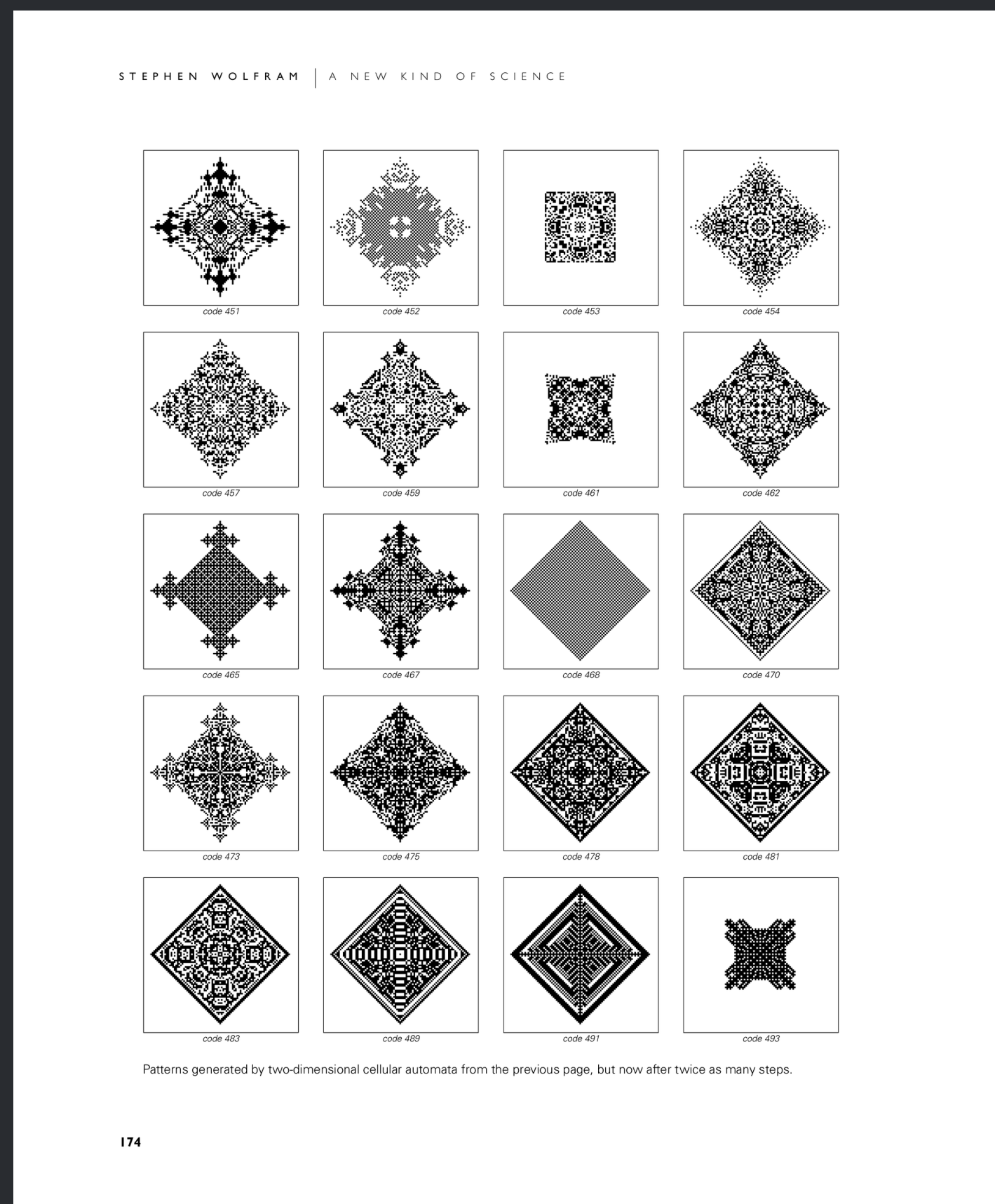
# 2018. 03 ~ 2018.09 NC SOFT, MCTS(Monte Carlo Tree Search)기반 3-Match 퍼즐 게임 난이도 평가 Agent 개발

## • MCTS Node 확장 방식

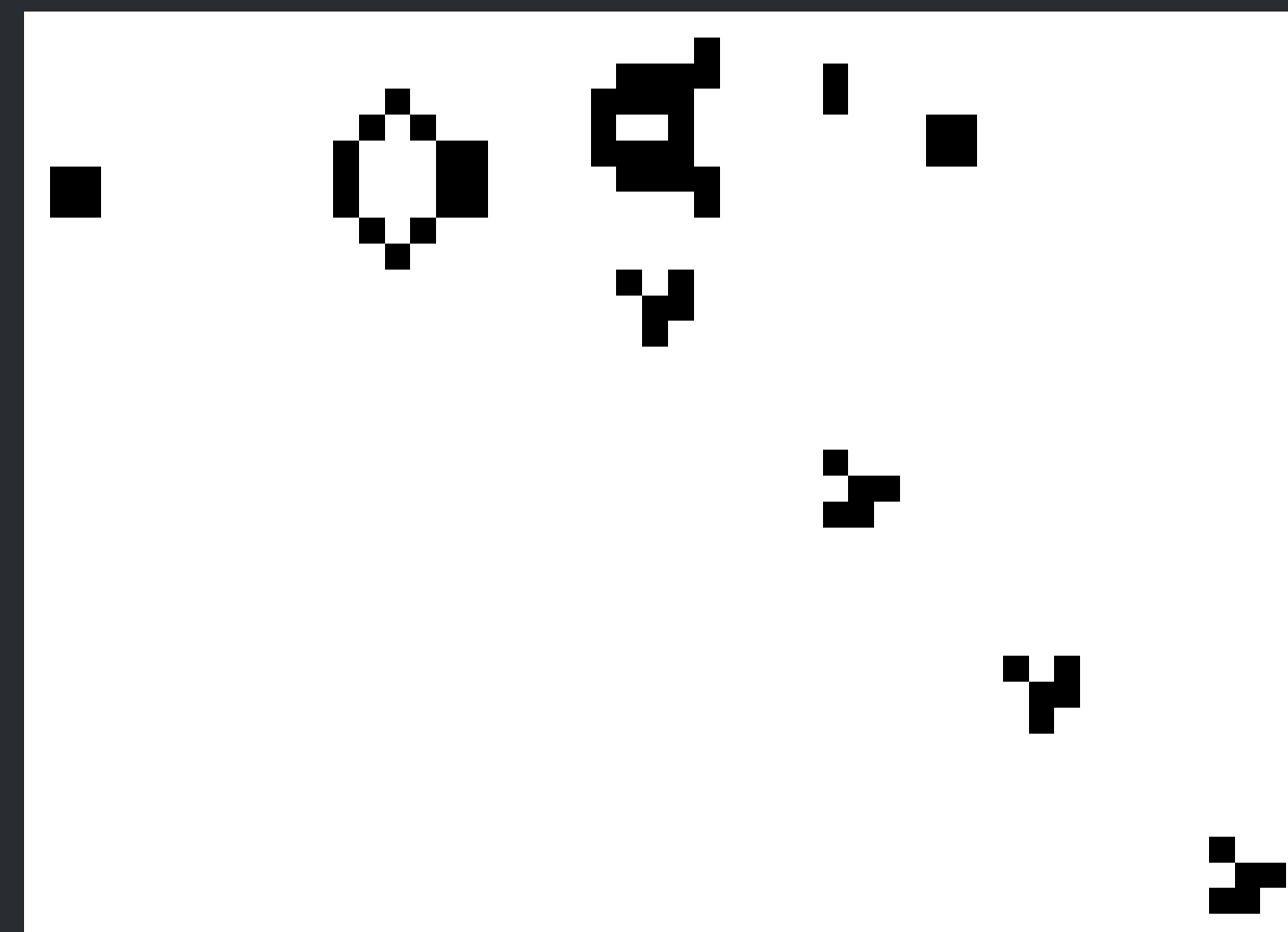


- 3-Match 게임의 난이도를 시뮬레이션 기반으로 평가하기 위한 Agent 개발
- MCTS 기능 구현 및 게임 로직에 Agent 적용
- 가속화 및 난이도 평가 결과 도출

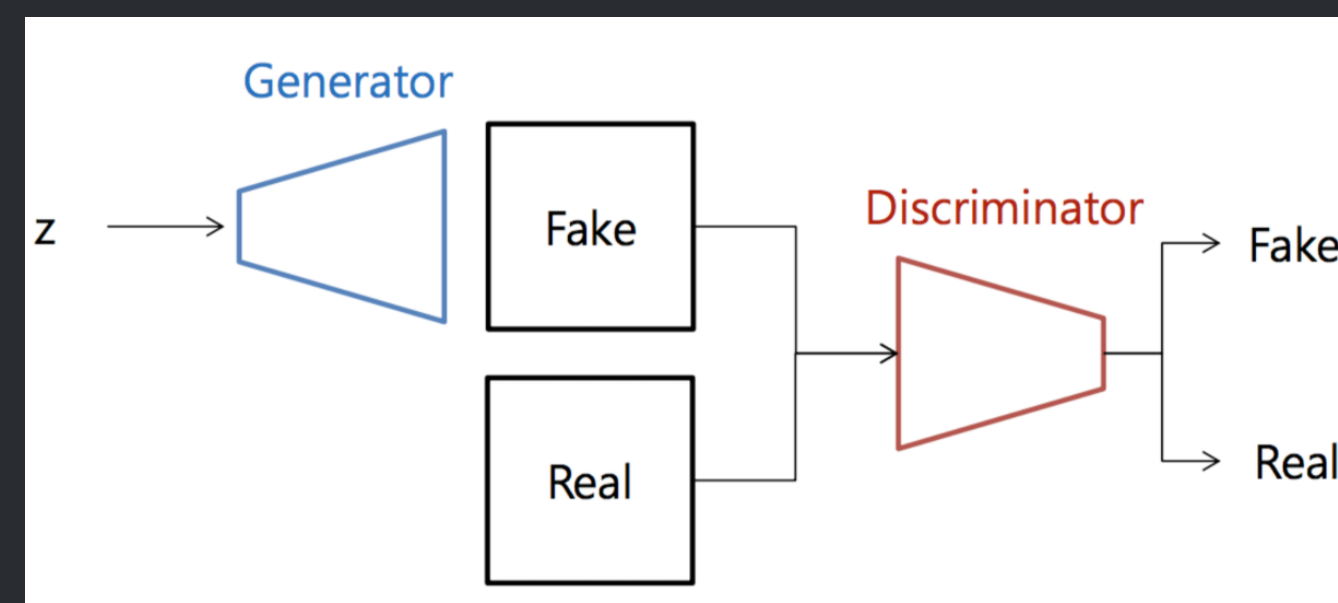
# 2018. 10 ~ 2021. 03 NC SOFT, CA(Cellula Automata)기반 3-Match 퍼즐게임 난이도 생성기 개발



Patterns by CA



Game of Life



GAN

- CA 기능 구현 및 CA 기반 Generator 개발
- CA Generative Combination 을 제안하여 Co-relationship pattern 개선
- GAN (Generative Adversarial Networks) 모델 학습데이터로 활용



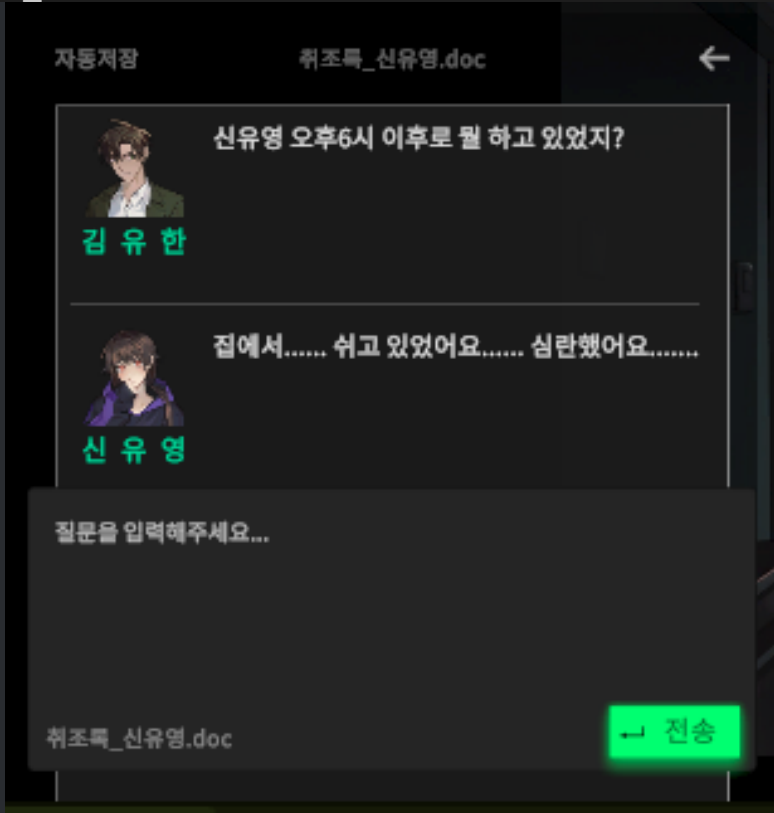
# 2024.07 ~ 2024. 08 개인프로젝트, 추리게임용 온 디바이스 SLM Chatbot 경량화 및 런타임 최적화

```
PeftModelForCausalLM(
  (base_model): LoraModel(
    (model): GPTNeoXForCausalLM(
      (gpt_neox): GPTNeoXModel(
        (embed_in): Embedding(30080, 2048)
        (emb_dropout): Dropout(p=0.0, inplace=False)
        (layers): ModuleList(
          (0-23): 24 x GPTNeoXLayer(
            (input_layernorm): LayerNorm((2048,), eps=1e-05, elementwise_affine=True)
            (post_attention_layernorm): LayerNorm((2048,), eps=1e-05, elementwise_affine=True)
            (post_attention_dropout): Dropout(p=0.0, inplace=False)
            (post_mlp_dropout): Dropout(p=0.0, inplace=False)
            (attention): GPTNeoXSdpaAttention(
              (rotary_emb): GPTNeoXRotaryEmbedding()
              (query_key_value): lora.Linear(
                (base_layer): Linear(in_features=2048, out_features=6144, bias=True)
                (lora_dropout): ModuleDict(
                  (default): Dropout(p=0.1, inplace=False)
                )
                (lora_A): ModuleDict(
                  (default): Linear(in_features=2048, out_features=8, bias=False)
                )
                (lora_B): ModuleDict(
                  (default): Linear(in_features=8, out_features=6144, bias=False)
                )
                (lora_embedding_A): ParameterDict()
                (lora_embedding_B): ParameterDict()
                (lora_magnitude_vector): ModuleDict()
              )
              (dense): Linear(in_features=2048, out_features=2048, bias=True)
              (attention_dropout): Dropout(p=0.0, inplace=False)
            )
            (mlp): GPTNeoXMLP(
              (dense_h_to_4h): Linear(in_features=2048, out_features=8192, bias=True)
              (dense_4h_to_h): Linear(in_features=8192, out_features=2048, bias=True)
              (act): GELUActivation()
            )
          )
        )
        (final_layer_norm): LayerNorm((2048,), eps=1e-05, elementwise_affine=True)
      )
      (embed_out): Linear(in_features=2048, out_features=30080, bias=False)
    )
  )
)
```

PEFT LoRA 학습결과

```
model loading...
/Users/jangyoung/Documents/Github/LiarHeart/Assets/StreamingAssets/StreamingAssets
Special tokens have been added in the vocabulary, make sure the embeddings work fine
model completely loaded
실행 시간 : 11.57147 초
클라이언트와 연결을 대기합니다...
클라이언트가 연결되었습니다. 주소 : ('127.0.0.1', 61251)
<socket.socket fd=5, family=2, type=1, proto=0, laddr=('127.0.0.1', 61251), raddr=('127.0.0.1', 61251)>
받은 답변 : Shinyooyoung!@#$$#@!신유영 오후 6시 이후로 뭘 하고 있었지?
답변 생성중
character: Shinyooyoung
questionText: 신유영 오후 6시 이후로 뭘 하고 있었지?
<startoftext>이름 :신유영
질문 : 신유영 오후 6시 이후로 뭘 하고 있었지?
답변 :
생성된 전체 텍스트 : <startoftext>이름 :신유영
질문 : 신유영 오후 6시 이후로 뭘 하고 있었지?
답변 : 집에서 ..... 쉬고 있었어요 ..... 심란했어요 .....
감정 : 감정없음

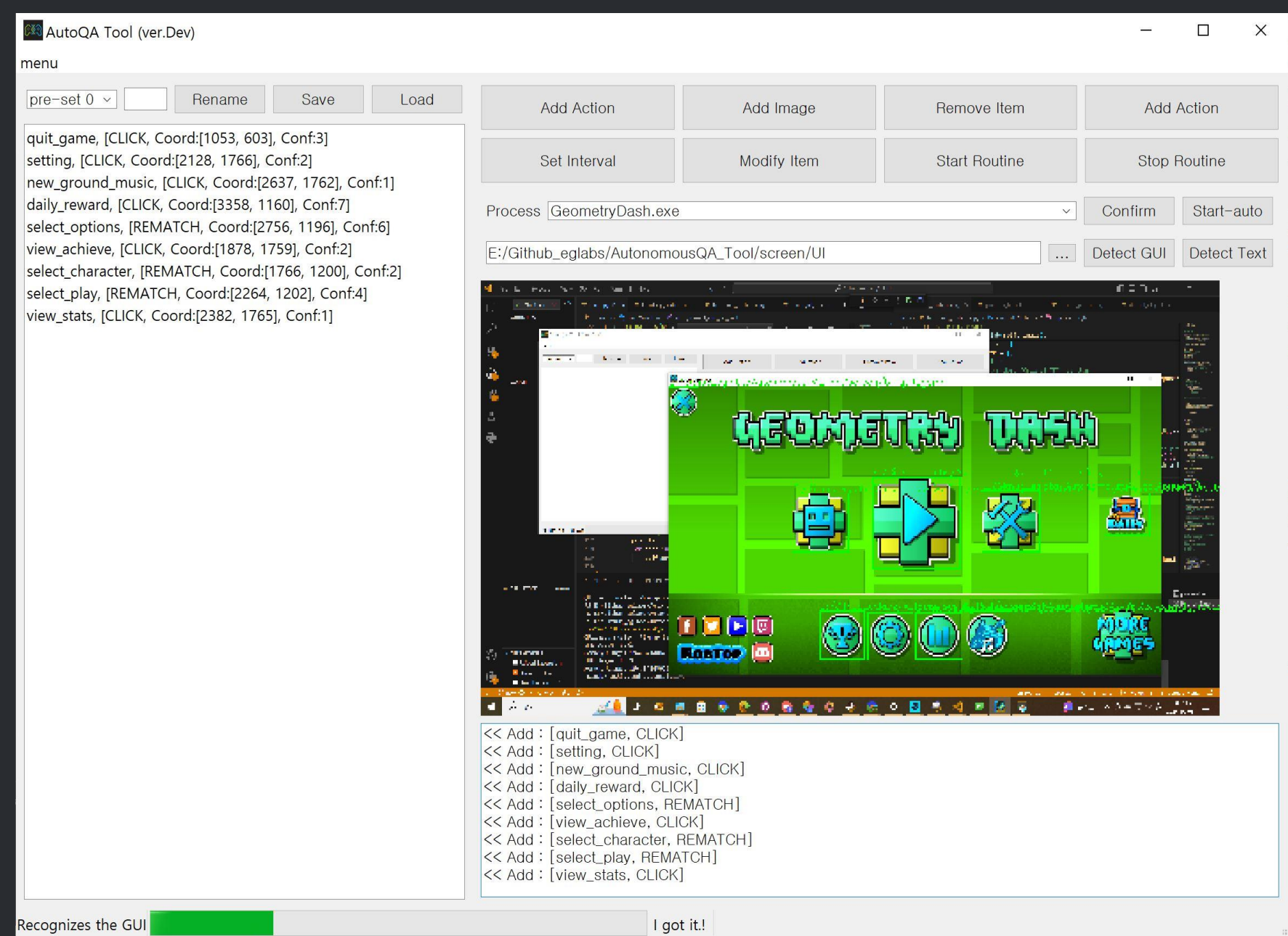
생성된 답변 : 집에서 ..... 쉬고 있었어요 ..... 심란했어요 .....
생성된 감정 : 감정없음
실행 시간 : 12.23388 초
[]
```



추리게임에 적용된 화면

- Polyglot-kr-1.3B 을 PEFT LoRA 학습
- LLM Python server 경량화를 위한 batch 로 분리 및 구조 설계
- Application service 를 위한 CPU 추론 모델 ONNX exporting

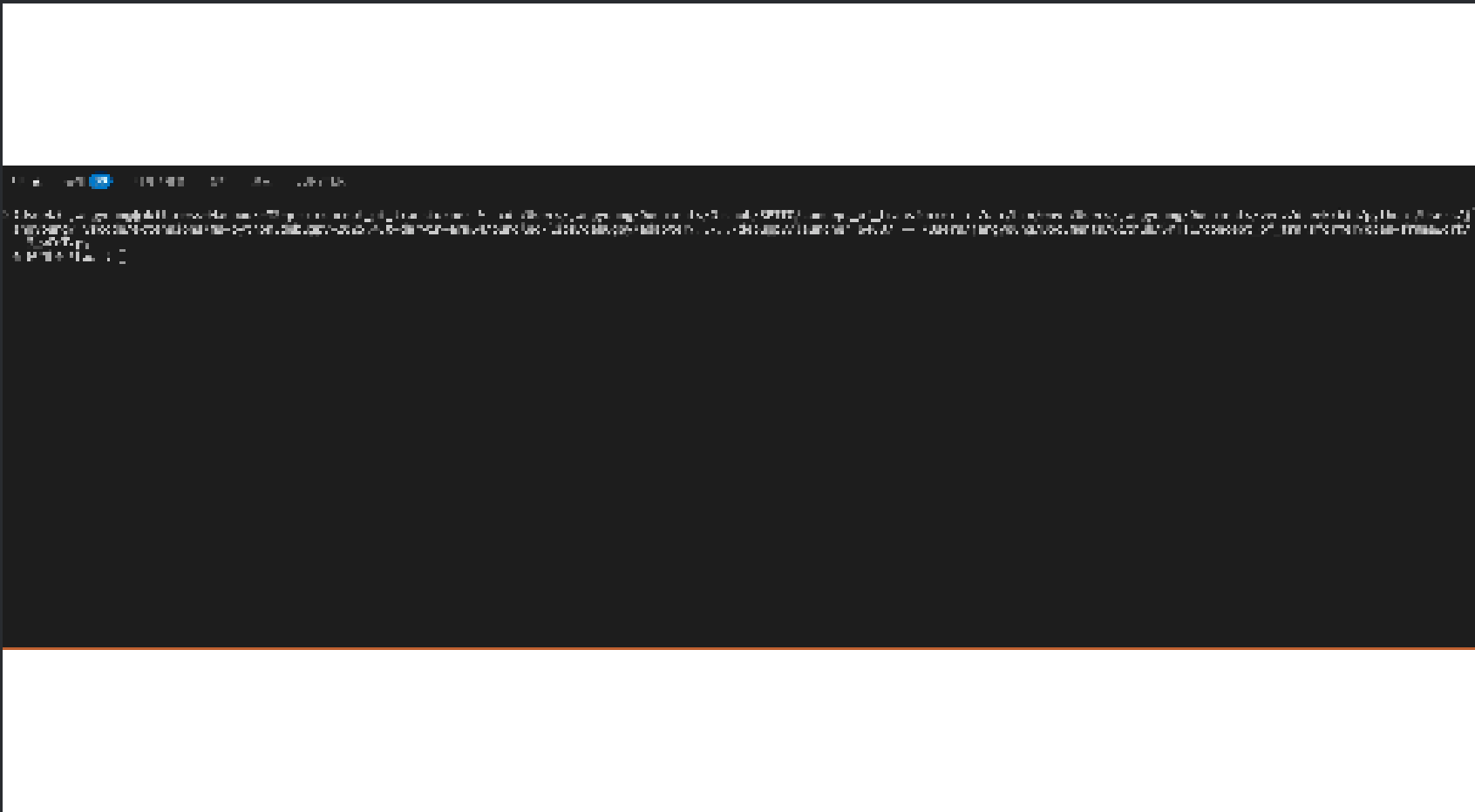
# 2024. 08 ~ 2024. 09 개인 프로젝트, 이미지 기반 시스템 독립적 AutoQA Tool



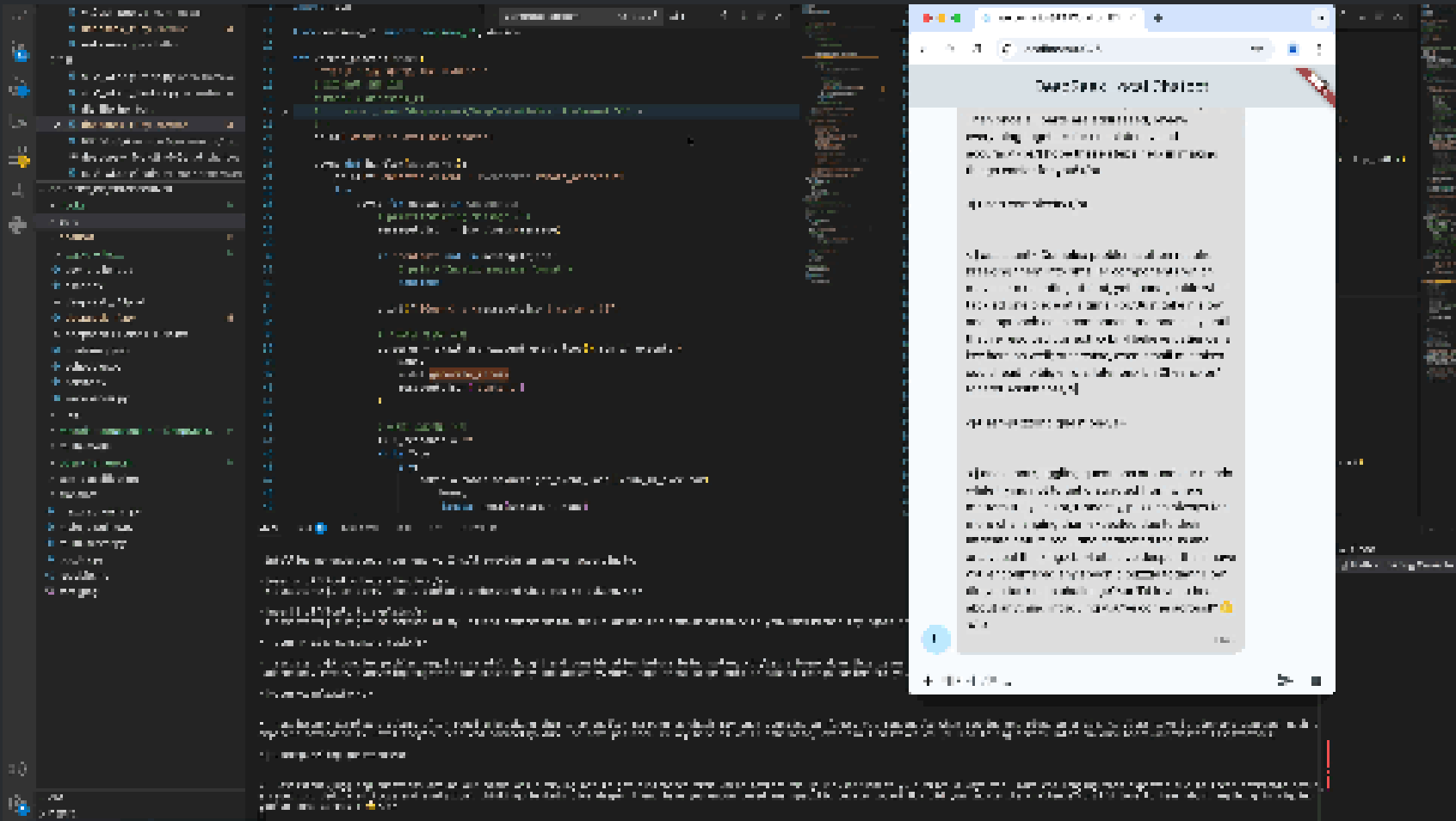
AutoQA Tool 동작 화면

- OpenCV 기반 Multi-Scale Template Matching 알고리즘 적용
- Thread Pool (GIL) 이용한 속도 최적화 및 Window Handler 적용한 Macro 기능
- Keras OCR 적용
- Fine-tune DETR 적용
- Fine-tune YOLOv7 적용
- (~현재) VLM 모델을 이용한 Context 오류 탐지 리포트 기능추가

# 2025. 01 ~ 2025.02. 개인프로젝트, SLM 기반 온 디바이스 에이전트 시스템 구축 프로젝트



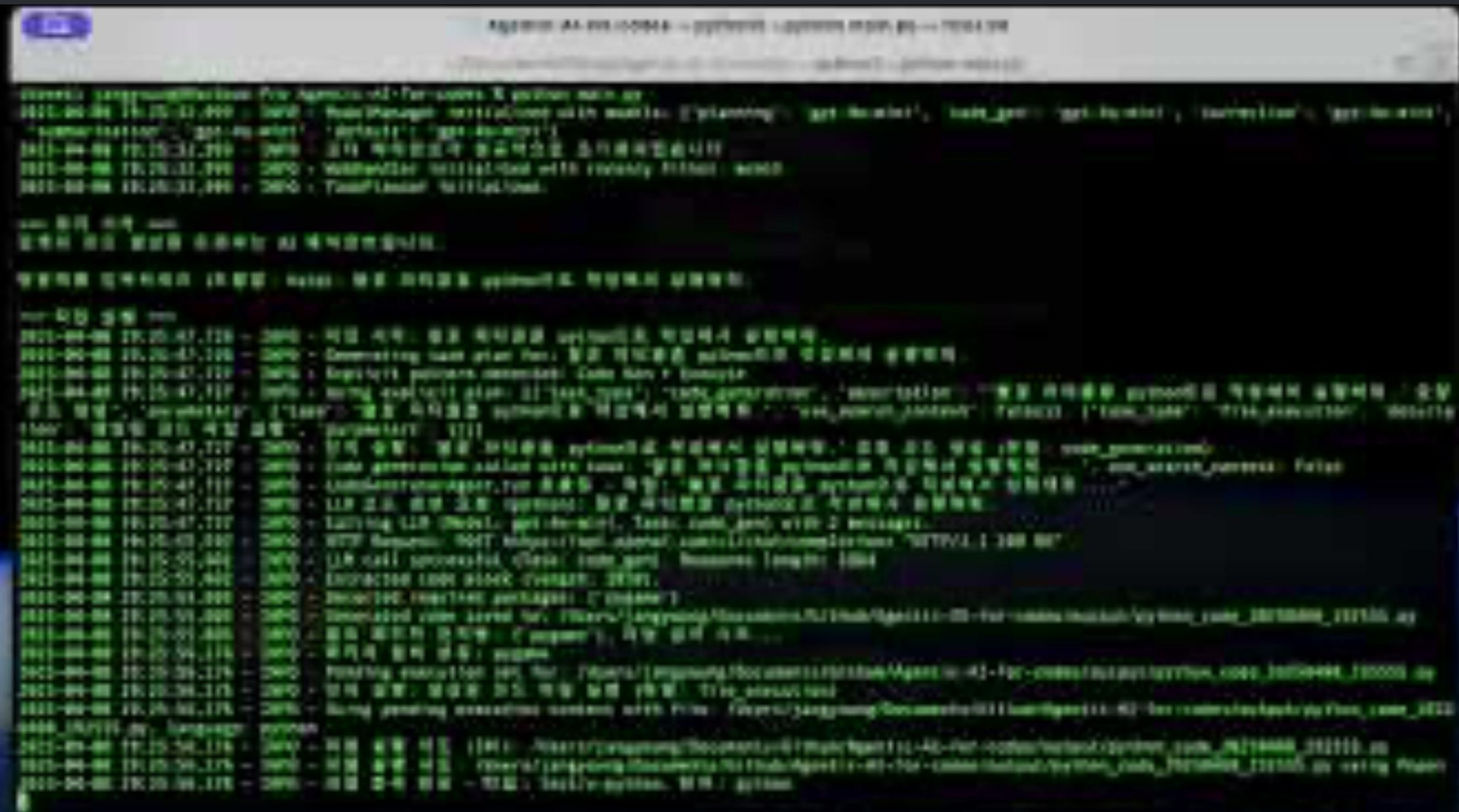
- DeepSeek R1 Distil Qwen 1.5B, TinyLlama, DistilBERT 등 모델 및 LlamaIndex, LangChain, LangGraph , CoT 적용 테스트 완료
- MCP(Model Context Protocol) 을 활용한 Agentic AI 기술 테스트
- Flutter 채팅 Client 환경 구성



Flutter 채팅 기능 구현 및 모델 테스트

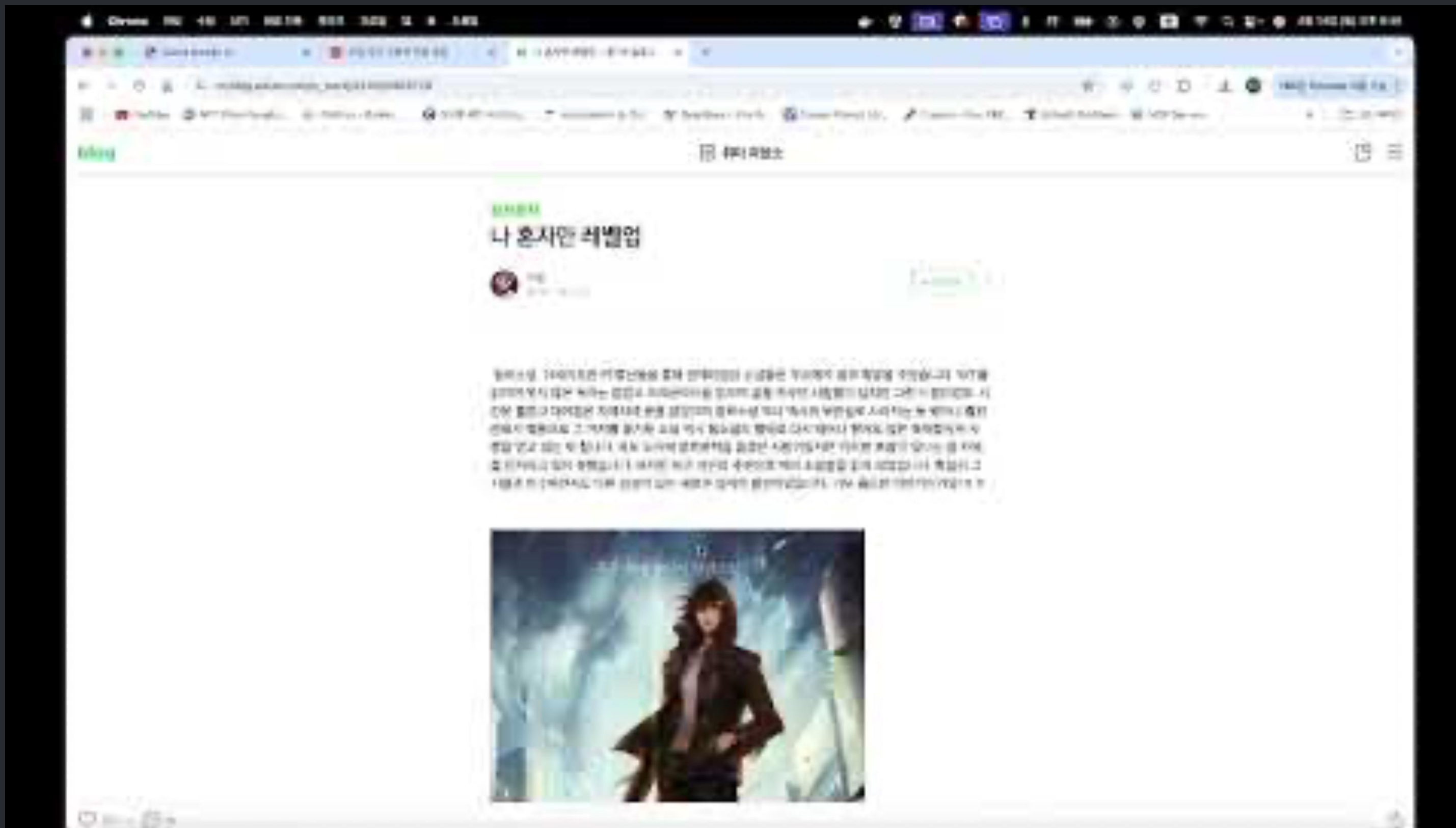


# 2025. 02 ~ 2025.03. 개인프로젝트, LLM 기반 Agentic AI – 코딩&웹 검색 : 바이브 코딩



- LLM 기반의 Smol Agent 구조 활용 ( OpenAI GPT API )
- Agentic AI의 Agent 기능 구현
- 언어별 코딩 파일 생성 및 실행 기능 구현, 구글 검색 기능 구현

2025. 03 ~ 2025.03. 개인프로젝트,  
LLM 기반 Game Design Agent 개발



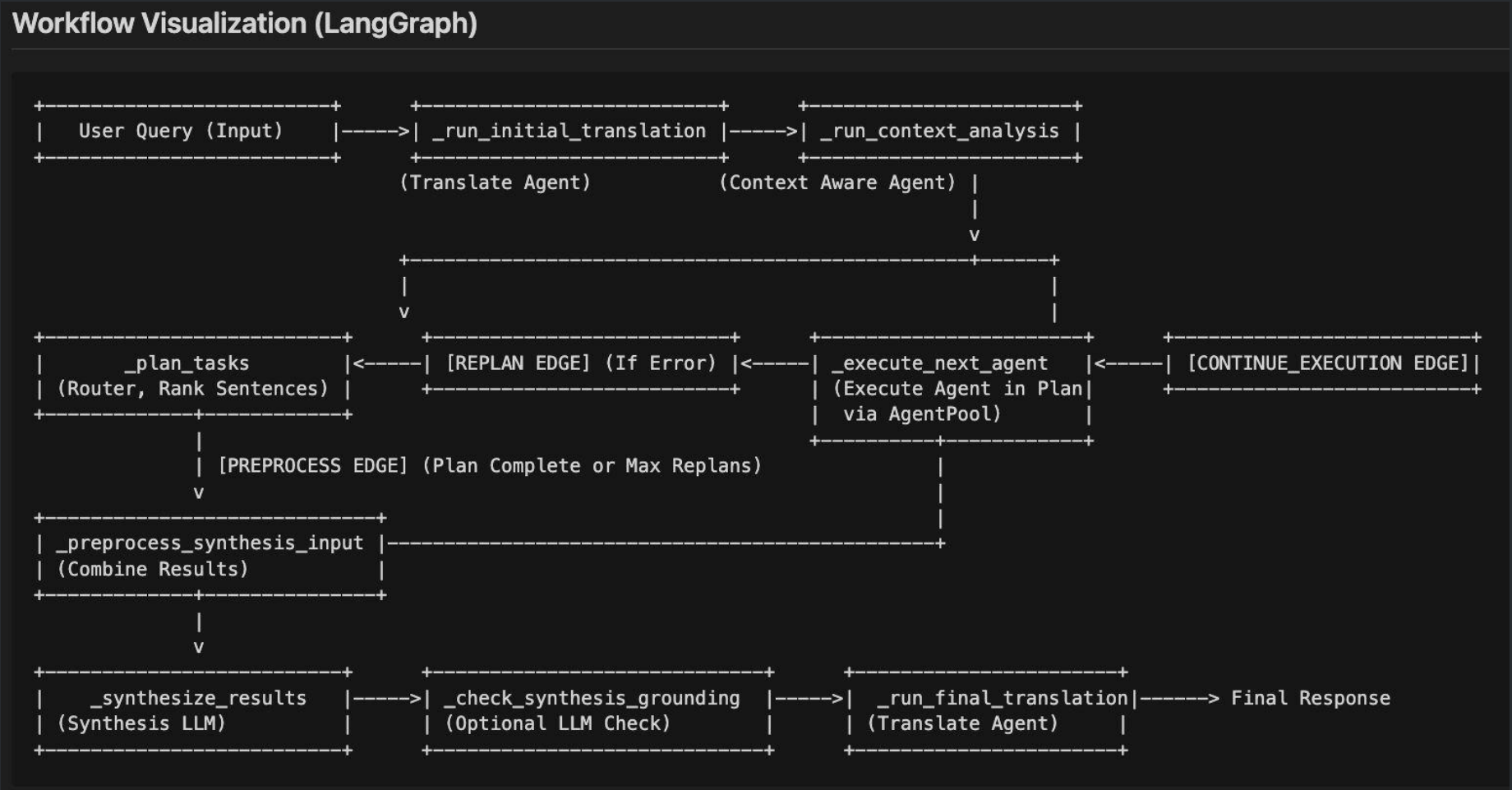
- ChatGPT API 를 활용한 Vive Game Design Agent 개발
- ColBERT 기반의 Embedding 를 활용한 Score 기반 Chunk, Qdrant VectorDB
- Task Planning 을 통한 Task Role (기획,시스템,밸런스,이벤트,시나리오) 동작
- Document(pdf,word,excel,pdf, pptx), Crawling 의 Function Calling

시나리오 데이터(링크, 문서)로부터 게임기획서(컨텐츠, 시스템, 밸런스, 이벤트, 시나리오) 제작 에이전트



# 2025. 04 ~ 2025.05. 개인프로젝트, 지능형 Multi-Agentic AI framework with Ollama, LangGraph & Praisona

```
2025-04-10 18:44:38.165 - WDM - INFO - [logger.py:11] - ===== WebDriver manager =====
2025-04-10 18:44:38.719 - WDM - INFO - [logger.py:11] - Get LATEST chromedriver version for google-chrome
2025-04-10 18:44:39.166 - WDM - INFO - [logger.py:11] - Get LATEST chromedriver version for google-chrome
2025-04-10 18:44:39.307 - WDM - INFO - [logger.py:11] - Driver [/Users/jangyoung/.wdm/drivers/chromedriver/mac64/135.0.7049.114/chromedriver-mac-arm64/chromedriver] found in cache
2025-04-10 18:44:40.524 - ToolFunctionHandler - INFO - [crawling.py:61] - Chrome browser initialized successfully.
2025-04-10 18:44:40.525 - ToolFunctionHandler - INFO - [crawling.py:90] - Crawling URL with Selenium: https://www.kkday.com/en/blog/55678/anta-depth-korea-top-10-best-experience-filled-and-attractions-in-overseas
2025-04-10 18:44:40.871 - ToolFunctionHandler - INFO - [crawling.py:94] - Page loaded, waiting for dynamic content...
2025-04-10 18:44:43.911 - ToolFunctionHandler - INFO - [crawling.py:124] - Successfully crawled URL with Selenium. Extracted ~7944 chars.
2025-04-10 18:44:44.622 - ToolFunctionHandler - INFO - [crawling.py:13] - Browser closed successfully
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [browser.py:60] - Successfully crawled content from https://www.kkday.com/en/blog/55678/anta-depth-korea-top-10-best-experience-filled-and-attractions-in-overseas
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [browser.py:61] - Attempting to crawl URL: https://www.tripadvisor.com/Attraction_Review-g556556-d556556-Reviews-Everland-Yongin_Gyeonggi_Do.html
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [crawling.py:191] - Using Selenium to crawl: https://www.tripadvisor.com/Attraction_Review-g556556-d556556-Reviews-Everland-Yongin_Gyeonggi_Do.html
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [crawling.py:54] - Setting up Chrome driver...
2025-04-10 18:44:44.822 - WDM - INFO - [logger.py:11] - ===== WebDriver manager =====
2025-04-10 18:44:44.822 - WDM - INFO - [logger.py:11] - Get LATEST chromedriver version for google-chrome
2025-04-10 18:44:44.822 - WDM - INFO - [logger.py:11] - Get LATEST chromedriver version for google-chrome
2025-04-10 18:44:44.822 - WDM - INFO - [logger.py:11] - Driver [/Users/jangyoung/.wdm/drivers/chromedriver/mac64/135.0.7049.114/chromedriver-mac-arm64/chromedriver] found in cache
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [crawling.py:61] - Chrome browser initialized successfully.
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [crawling.py:90] - Crawling URL with Selenium: https://www.tripadvisor.com/Attraction_Review-g556556-d556556-Reviews-Everland-Yongin_Gyeonggi_Do.html
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [crawling.py:94] - Page loaded, waiting for dynamic content...
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [crawling.py:124] - Successfully crawled URL with Selenium. Extracted ~15 chars.
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [crawling.py:13] - Browser closed successfully
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [browser.py:60] - Successfully crawled content from https://www.tripadvisor.com/Attraction_Review-g556556-d556556-Reviews-Everland-Yongin_Gyeonggi_Do.html
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [browser.py:61] - Attempting to crawl URL: https://preparetravelplans.com/everland-theme-park-guide/
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [crawling.py:191] - Using Selenium to crawl: https://preparetravelplans.com/everland-theme-park-guide/
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [crawling.py:54] - Setting up Chrome driver...
2025-04-10 18:44:44.822 - WDM - INFO - [logger.py:11] - ===== WebDriver manager =====
2025-04-10 18:44:44.822 - WDM - INFO - [logger.py:11] - Get LATEST chromedriver version for google-chrome
2025-04-10 18:44:44.822 - WDM - INFO - [logger.py:11] - Get LATEST chromedriver version for google-chrome
2025-04-10 18:44:44.822 - WDM - INFO - [logger.py:11] - Driver [/Users/jangyoung/.wdm/drivers/chromedriver/mac64/135.0.7049.114/chromedriver-mac-arm64/chromedriver] found in cache
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [crawling.py:61] - Chrome browser initialized successfully.
2025-04-10 18:44:44.822 - ToolFunctionHandler - INFO - [crawling.py:90] - Crawling URL with Selenium: https://preparetravelplans.com/everland-theme-park-guide/
```



- 온 디바이스 Ollama 서버, praisonaigens 를 이용한 multi-agents Workflow process
- Knowledge Graph 기반의 Sementic Routing
- MCP(Model Context Protocol), Function Calling(Crawling) Handler

지능형 멀티 에이전트 워크플로우 프레임워크 구축