Arts and Advanced Big Data

v1.0

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Review

➢ Week 1 — Instructor & Course Introduction

- ➢ Met the instructor and classmates
- ➢ Learned course goals and methods
- ➢ Key idea: Arts × Advanced × Big Data
- ➢ Tool for communication: Trello

➢ Week 2 — Coding with Prompt: Introduction

- ➢ First demo of a Generative Poster in Python
- ➢ Learned the workflow: Prompt → Code → Run → Refine
- ➢ Concepts: randomness, lists, loops, functions, matplotlib
- ➢ Reference Code

➢ Week 3 — Coding with Prompt: Practice

- ➢ Practiced changing parameters (layers, wobble, radius)
- ➢ Designed custom color palettes (pastel, vivid, mono)
- ➢ Added style presets (Minimal, Vivid, NoiseTouch)
- ➢ Learned reproducibility with seed + saving posters as PNG
- ➢ Reference Code

➢ Week 4 — Coding with Prompt: Extensions

- ➢ Interactive & 3D-like posters

➢ Week 5 — Data-Driven Generative Poster (CSV)

- ➢ Data is everywhere. AI is also everywhere.
- ➢ Data exists in many forms
  - ➢ Structured Data
  - ➢ Semi-Structured Data
  - ➢ Unstructured Data
- ➢ Data is not only information – it's material for creativity.
- ➢ Main Activity
  - ➢ Create a generative poster whose colors come from a CSV palette.
  - ➢ **Reference Code**

➢ Week 6 – Happy Chuseok (No Class)

- **Week 7 — MCP (Model Context Protocol)**
  - MCP Basic Concepts & Architecture
    - MCP Client
    - MCP Server
  - Claude Desktop Installation
  - MCP Local Filesystem Setup & Test

- **Week 8 – Mid-Term All-in-One (No Class)**

- **Week 9 – Web-based**
  - Modern Software Development Style
    - LLM ←→ Colab ←→ Github ←→ Streamlit

➢ Week 10 — Open API

- ➢ Open API Concepts & Architecture
  - ➢ Web Client
  - ➢ Web Server
- ➢ Sample Sites using Open API
  - ➢ Explore Artworks with MET Museum API
    - ➢ https://artwork-rdy2gcm6lksscmcdcscxdj.streamlit.app/
  - ➢ Open-Meteo Interactive Weather Dashboard
    - ➢ https://weather-wkphpaukijoaqqbrtdyvtu.streamlit.app/
  - ➢ Kospi200 Recommendation Service
    - ➢ https://kospi200.streamlit.app/

Role-based Chatbot

- **Role-based Chatbot**
  - AI models can answer general questions.
  - If we give them **a role**, they become more creative and useful. For example, a chatbot can act as:
    - a video production expert
    - a fashion consultant
    - a dance coach
    - a performing arts critic.

- You'll design your own chatbot that 'thinks and speaks' like a professional in one creative field.

➢ Goal

➢ Implement a **role-based chatbot** using Claude or OpenAI API.

Role	Description	Example Question
🎥 Video Director	Analyzes mood, camera angle, lighting	"How can I shoot a dream sequence?"
💃 Dance Instructor	Suggests movement, rhythm, expression	"How can I express sadness through movement?"
👗 Fashion Stylist	Explains color trends, materials, silhouette	"What style fits a confident personality?"
🎭 Acting Coach	Teaches emotion delivery, scene breakdown	"How to express fear naturally on stage?"
🎨 Art Curator	Interprets artwork, connects with data	"How does this composition convey emotion?"

Demo

- https://role-chatbot-openai-4ofn6rvfxizvg3kezoaau9.streamlit.app/