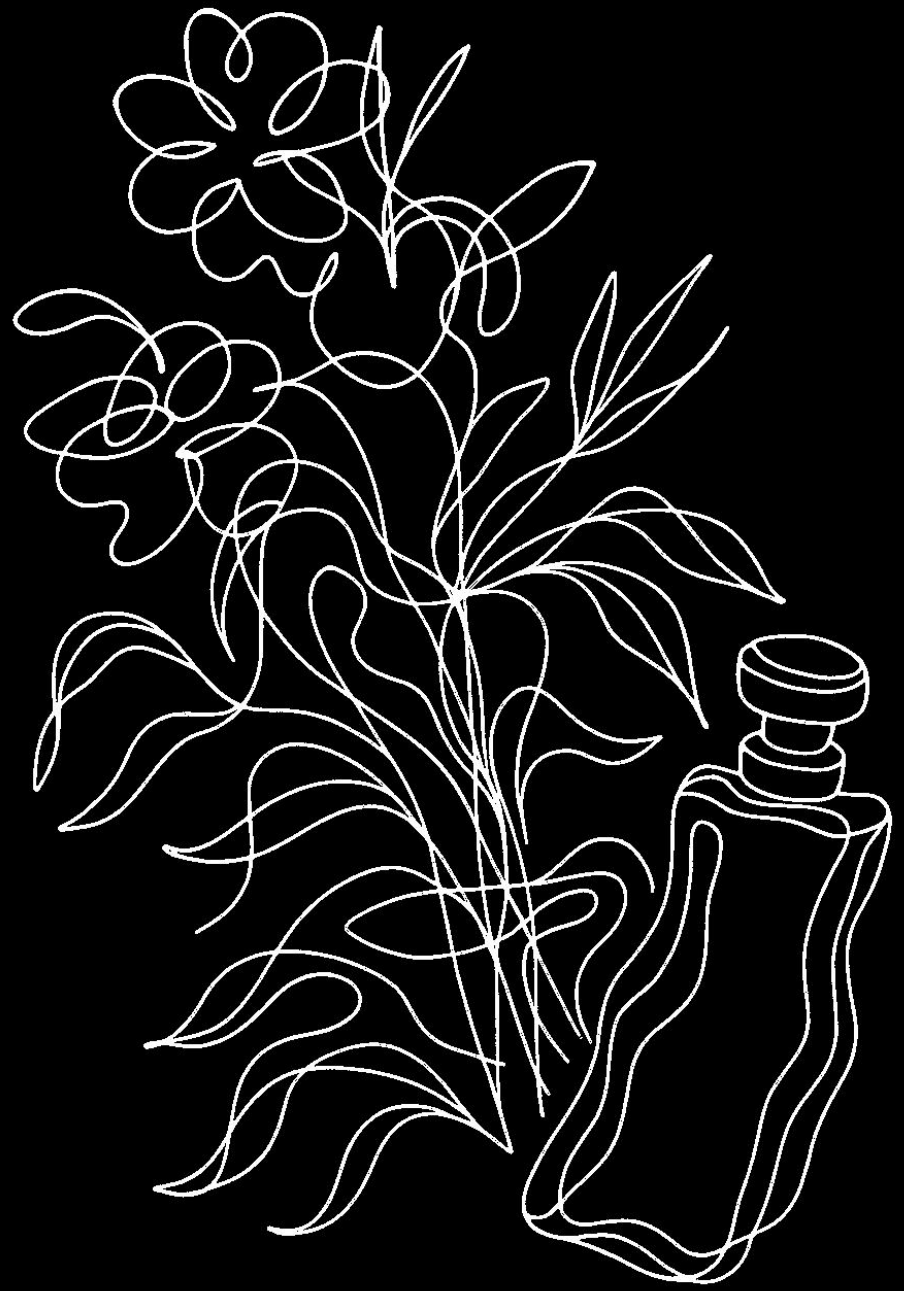


Perfumer

— Comprehensive Scent Expert

Code Project Repository:
https://git.arts.ac.uk/24004238/Data-Science-in-the-Creative-Industries_Project_MingzhaoDu

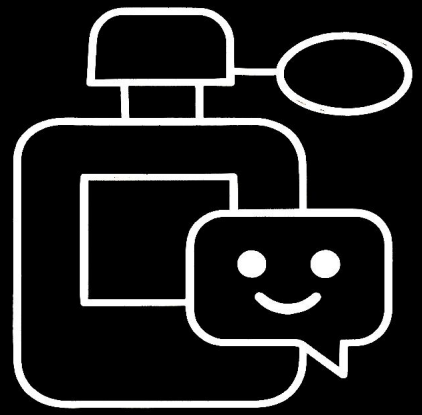
Video Presentation:
https://mega.nz/file/n64WgAJR#KBgNmEutJIBvql4gEtxhrqotXZtE0B5QI_rtSVvn8Zc

Data Science in the Creative Industries
Designed by MINGZHAO DU
ID: 24004238

Project Overview

Two Core Modules

- IntentChatbot: Parses user input, applies VADER sentiment analysis and rule patterns to detect mood and intent (greetings, recommendations, jokes, etc.).
- PerfumeChatbot: Filters and ranks perfumes based on scent keywords or zodiac signs using a predefined JSON dictionary and CSV dataset.



Core Features (“Comprehensive” and “Professional”)

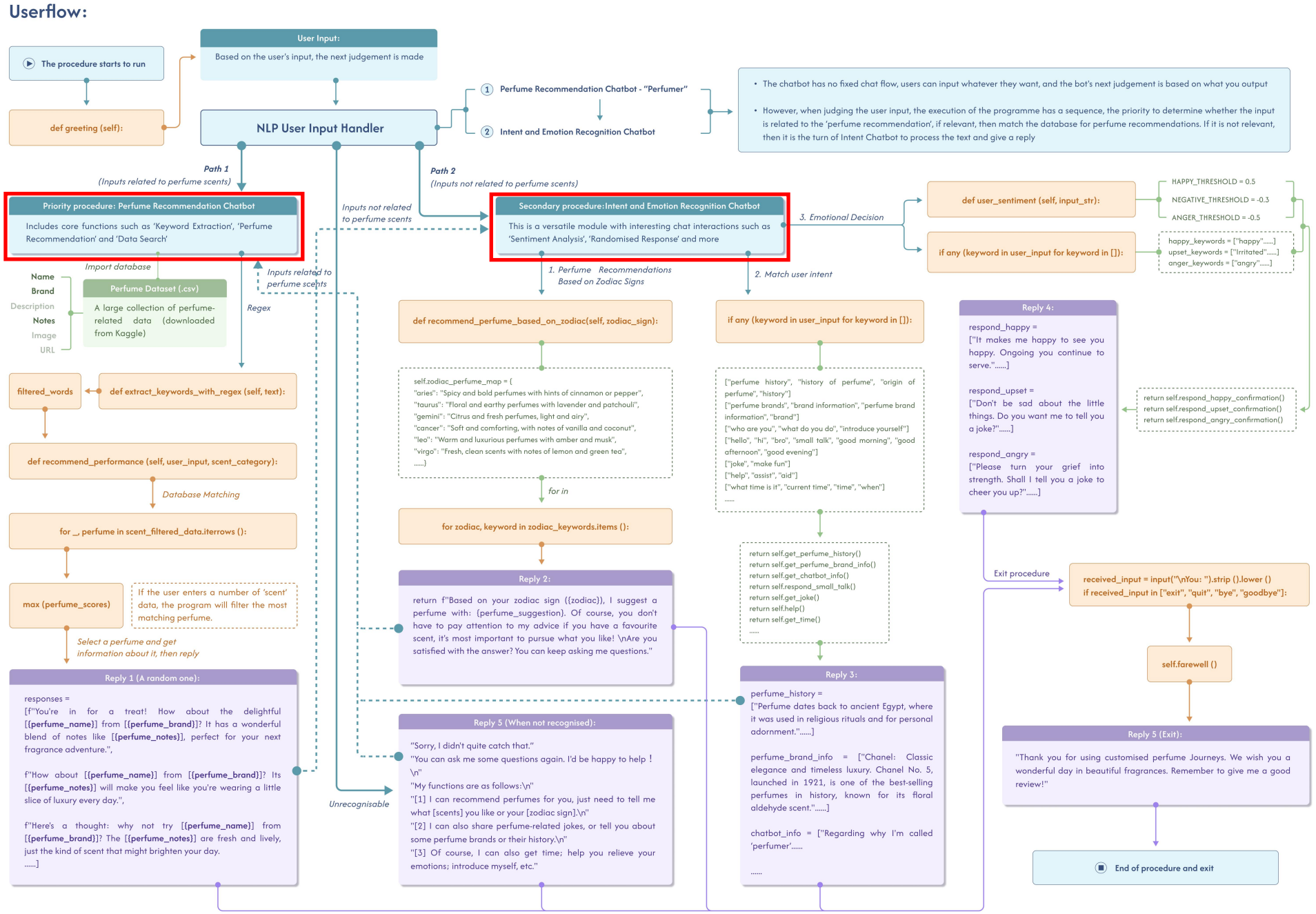
- Rule-based + lightweight NLP perfume recommendations
- VADER sentiment analysis for adaptive tone
- Zodiac suggestions, brand trivia & playful jokes

Flow Chart

User input parsing

Index to the corresponding core module

Emotion and intention recognition



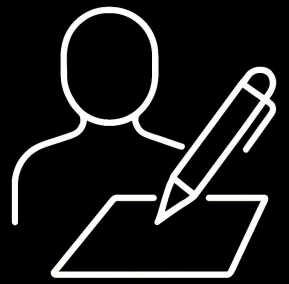
Why Push This Project Further?

User Perspective：

- Traditional filters rely on fixed formats and keywords, and are unable to capture users' true feelings.
- Perfumer offers a more fluid and emotionally intelligent interaction, lowering the barrier for fragrance discovery.

Brand Perspective:

- Most perfume brands lack online interactive recommendation tools.
- Perfumer can become a ‘conversational recommendation’ gateway, enhancing user engagement.



Creator Perspective:

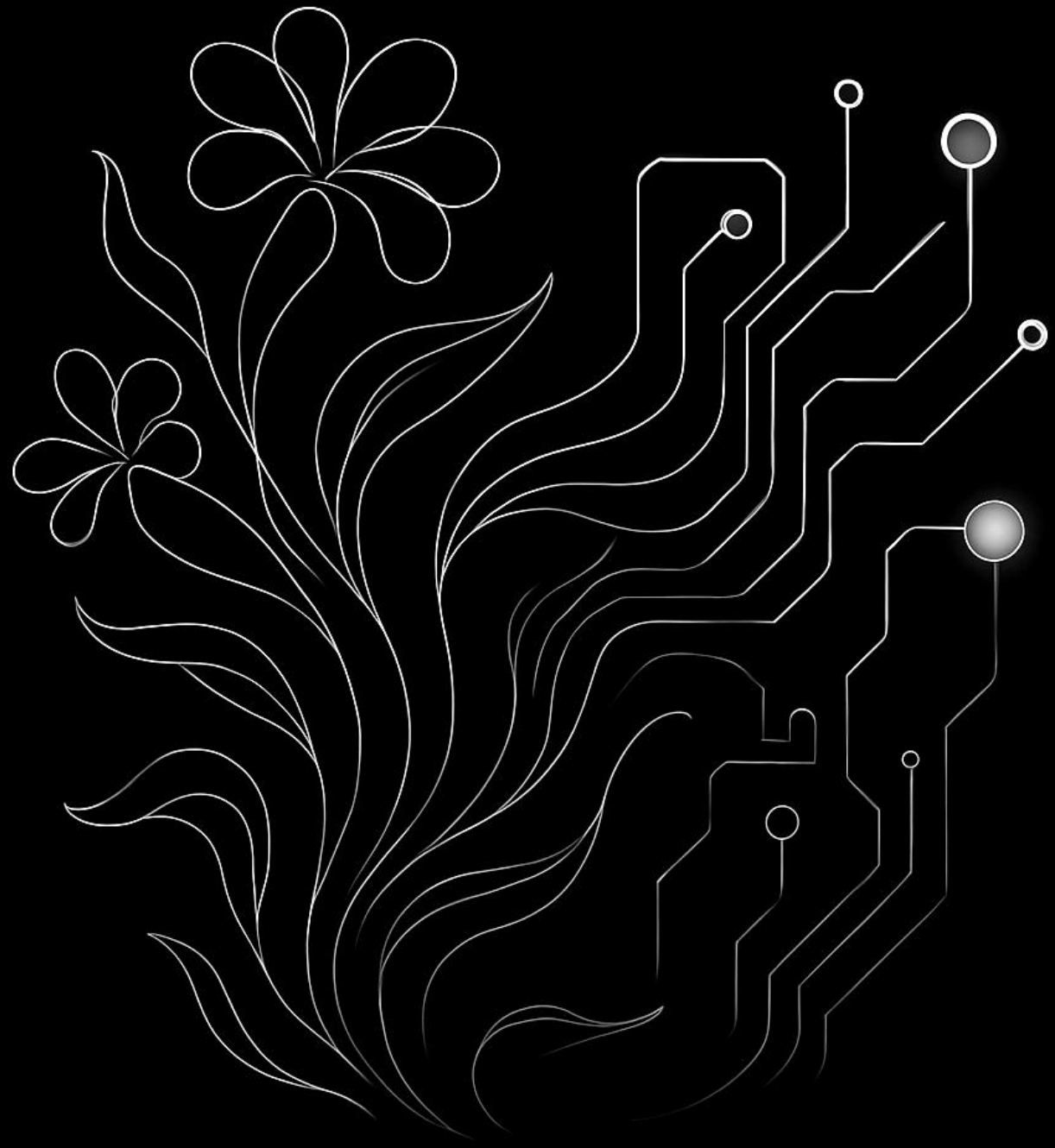
- As a perfume enthusiast, I want this to grow from a course prototype into a useful tool.
- It blends my passion and technical skills, and reflects long-term personal interest.

Vision & Cultural Motivation

‘Perfumer’ explores how AI can support sensory experiences — not just to pick scent, but to feel it.

It’s a comprehensive, user-friendly space for expressing personal preferences and discovering the emotional and cultural richness of fragrance.

Not a tool for selling, but for sparking curiosity, growing knowledge, and offering a deeply satisfying journey into scent.



How to Take the Project Further

Technical Enhancements

Existing Programme —— *Direction of improvement* ——→ **Future Programme**

Based on simple keyword matching and rule-based intent detection

⬇

Ambiguous or context-dependent expressions are prone to misinterpretation without nuanced language understanding.

Integrating Lightweight NLP Models (e.g DistilBERT)

⬇

Improve the chatbot's ability to understand natural, nuanced user inputs.

While the codebase is already separated into classes like *IntentChatbot* and *PerfumeChatbot*, their dependencies are still tightly coupled.

Modular Architecture Upgrade

⬇

Decouple the core components for better scalability and maintainability.

How to Take the Project Further

Productization

Web Prototype

Intuitive UI for accessible recommendations

Multi-platform Access

Integrate with ins and social apps

Feedback Loop

“Like/Dislike” buttons for user-driven tuning

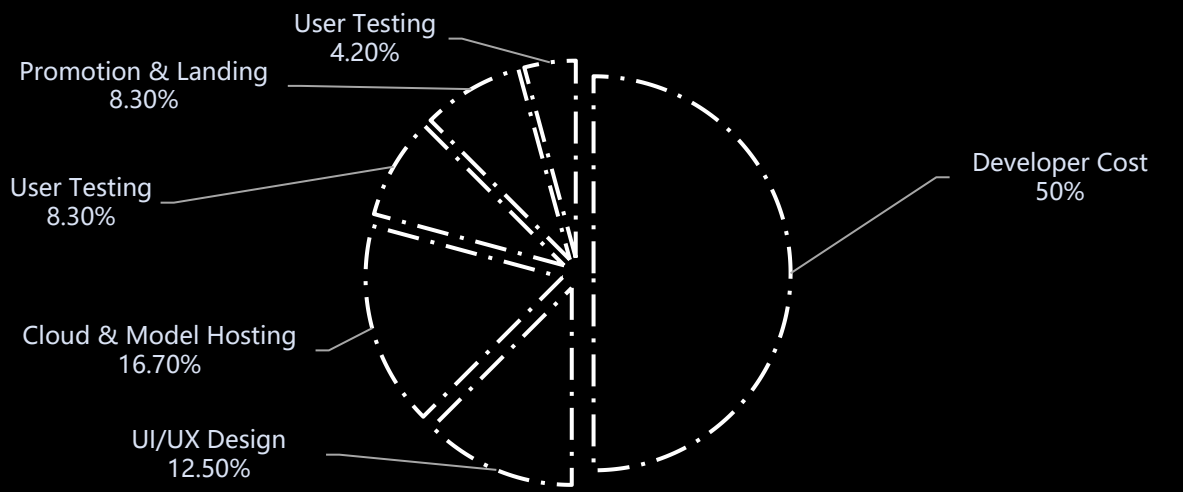
Strategy

- **Agile Workflow:** Scrum-based, deliver demo every 2 weeks

- **Test & Iterate:** Combine unit tests with user feedback

- **Light Deployment:** Locally runnable, scalable to low-resource setups

Project Requirements & Estimated Budget



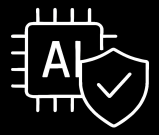
Category	Details	Estimated Cost (GBP)
Developer Cost	2 part-time developers for 2 months	£12,000
UI/UX Design	Web prototype + visual assets	£3,000
Cloud & Model Hosting	Lightweight NLP model + server (3 months)	£4,000
User Testing	Incentives, surveys, micro-interviews	£2,000
Promotion & Landing	Website, content design, basic SEO	£2,000
Tools & Licenses	Prototyping, monitoring, versioning tools	£1,000

Legal & Ethical Considerations

Data & Privacy (GDPR)

- No personal data collected → The chatbot does not store names, emails, or identifiers
- Anonymous feedback only → "Like/Dislike" used to improve recommendations, not user profiling
- Local-first processing → Runs locally or on GDPR-compliant cloud services
- Scalable compliance → Ready to implement consent forms and data access policies if scaled

Ethical Use of AI



- Tone adaptation, not emotional manipulation → Sentiment analysis adjusts replies gently, without exploiting mood
- No behavioral tracking → Inputs like zodiac are symbolic; no personal traits are inferred
- Transparent rules → Clear explanation of how recommendations are generated

‘Perfumer’ respects user privacy and values, aiming to enhance discovery — not data collection.

Development Timeline

Jul - Aug 2025

Core NLP Development

- Multi-turn conversation
- Intent classification
- Context tracking

Sep - Oct 2025

Productization & UI

- Web UI prototype
- Modular backend
- Multi-platform prep

Nov 2025

User Testing

- Feedback collection
- Like/dislike system
- Early iteration

Dec 2025

Beta Launch & Evaluation

- Publish landing page
- Monitor usage
- Final evaluation