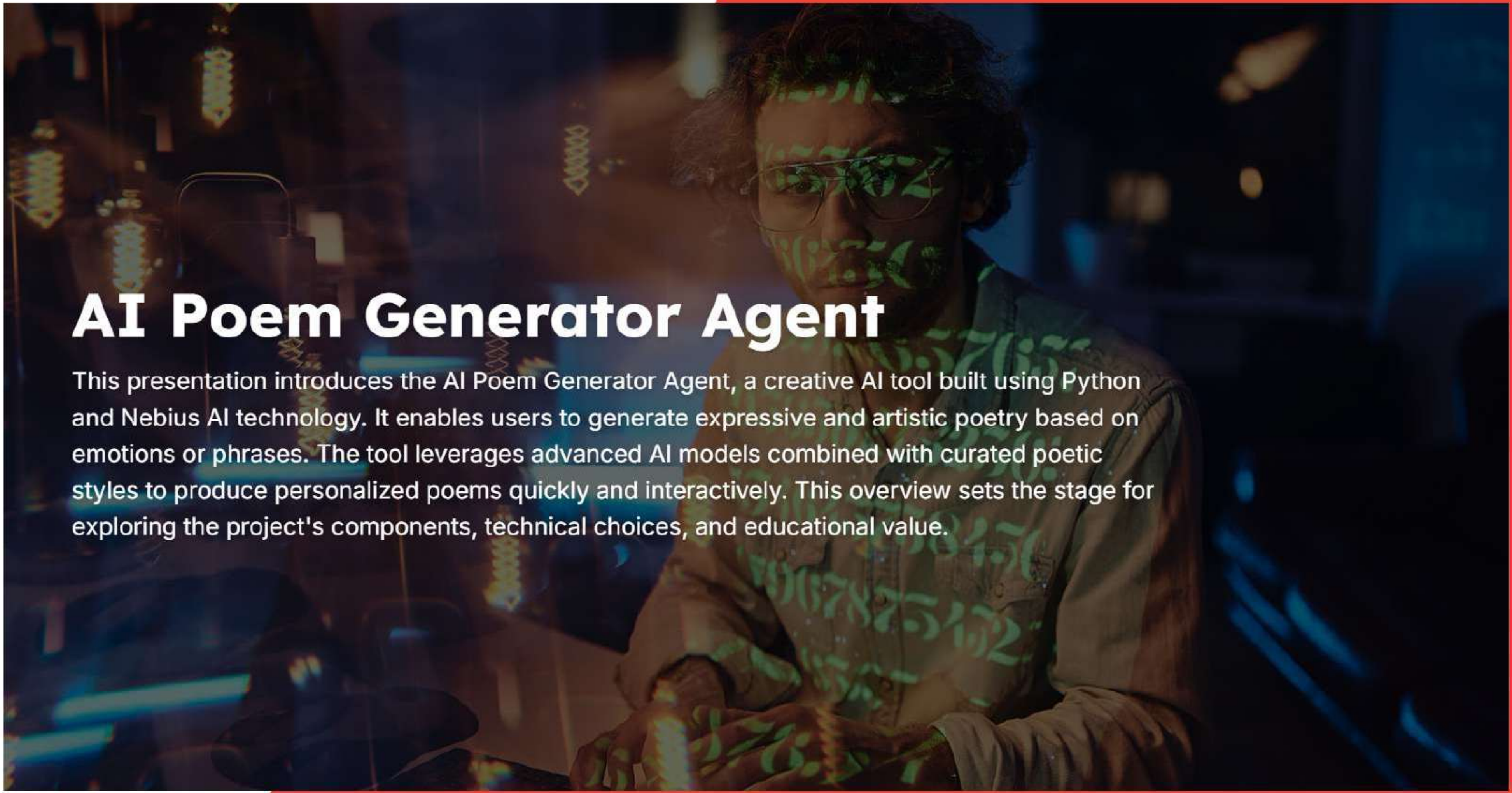


# AI Poem Generator Agent

This presentation introduces the AI Poem Generator Agent, a creative AI tool built using Python and Nebius AI technology. It enables users to generate expressive and artistic poetry based on emotions or phrases. The tool leverages advanced AI models combined with curated poetic styles to produce personalized poems quickly and interactively. This overview sets the stage for exploring the project's components, technical choices, and educational value.

# What the Project Does

AI-powered poem generation customized by user input and style controls

01 Generate poems from user inputs: **emotions** or **specific phrases**

02 Customizable outputs via **mood, style, theme, rhyme scheme**

03 Optional blend of styles inspired by **famous poets**

04 Quick, interactive workflow for exploring diverse poetic expressions

05 Accessible design that supports creative experimentation

# Why This Project?

Bridging poetry, programming, and real AI workflows for learners

- **Bridge between art and tech** — connects poetic creativity with programming practice
- **Hands-on API learning** — demonstrates practical API usage and AI integration workflows
- **Educational resource** — valuable for students and educators in computational arts and programming
- **Extends human creativity** — shows how AI augments artistic expression, not replaces it
- **Encourages exploration** — fosters experimentation with creative coding and practical AI examples

# Technical Stack Overview

Core tools enabling poem generation, UI, and reference retrieval

**Python** — primary language for orchestration, model calls, and data processing

**Nebius AI API** — advanced poem generation via powerful language models

**Gradio** — user-facing web interface for interactive inputs and poem display

**RAG (Retrieval-Augmented Generation)** — curated poet reference samples to guide tone

# Code Overview: Poem Generation Pipeline

Authentication, client init, style store, and dual poem engines

**Secure auth:** load Nebius API key for authentication

**Client initialization**: instantiate Nebius AI client for platform communication

**Style store**: dictionary of excerpts from **Shakespeare**, **Poe**, **Tagore** for reference

**Poem engine A**: emotion-driven generator with rhyme and theme customization

**Poem engine B**: phrase-inspired generator using input phrases, optional style blending

**Style blending:** optional mix of selected poet styles to enhance output

**Flow summary:** auth → client → style store → choose engine → generate poem

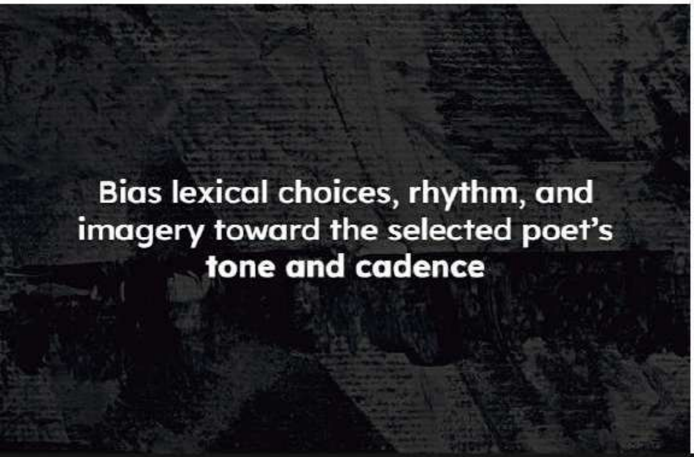
# RAG Component: Style-Grounded Generation

Use curated poet samples to steer tone, emotion, and literary nuance

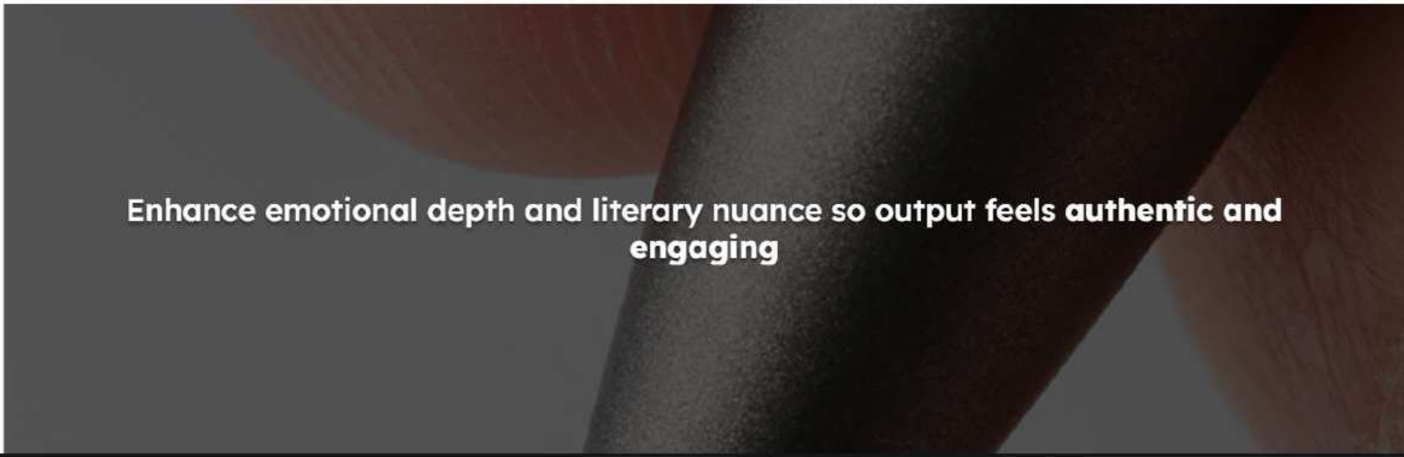
Store curated **poetic style samples** from selected poets as dictionary entries

Retrieve relevant samples by matching prompt context to dictionary tokens

Provide the AI with retrieved excerpts as **contextual guidance** during generation



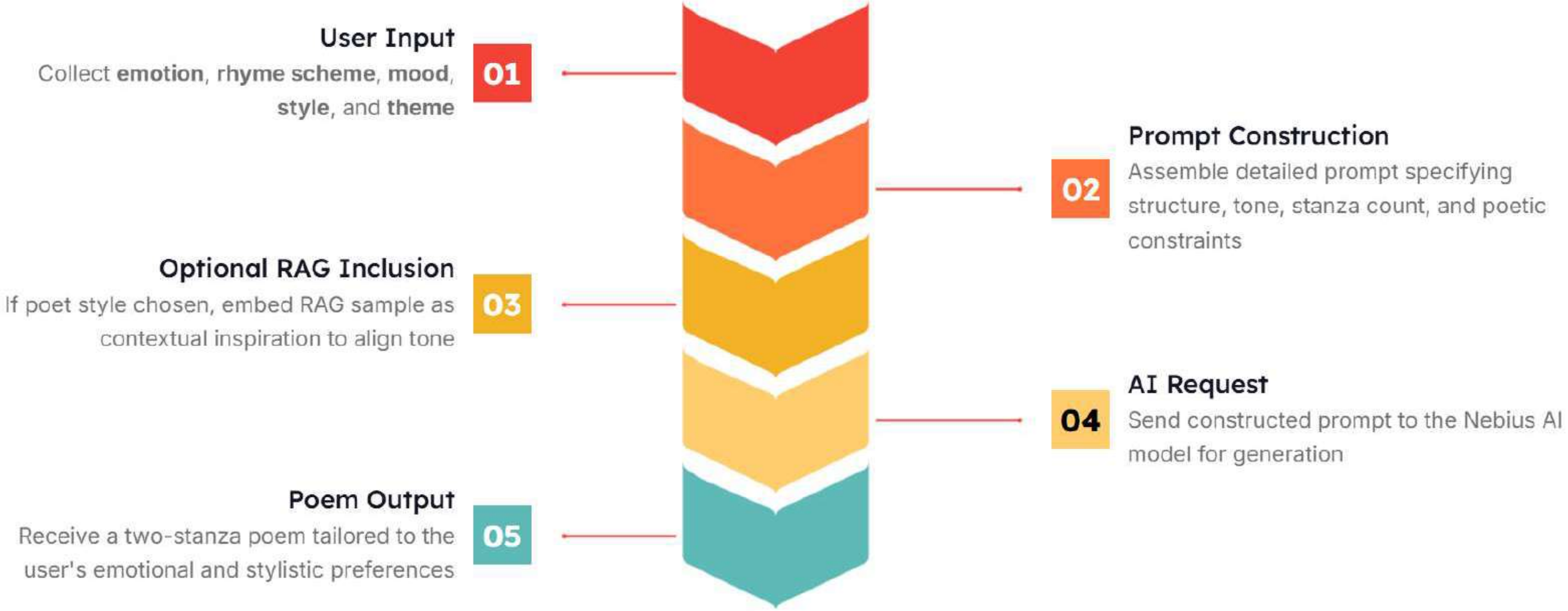
Bias lexical choices, rhythm, and imagery toward the selected poet's **tone and cadence**



Enhance emotional depth and literary nuance so output feels **authentic and engaging**

# Emotion-Based Poem Function

Turn user emotion, rhyme, mood, style, and theme into a two-stanza poem via a structured AI prompt



### User Input

01

Collect **emotion**, **rhyme scheme**, **mood**, **style**, and **theme**

### Prompt Construction

02

Assemble detailed prompt specifying structure, tone, stanza count, and poetic constraints

### Optional RAG Inclusion

03

If poet style chosen, embed RAG sample as contextual inspiration to align tone

### AI Request

04

Send constructed prompt to the Nebius AI model for generation

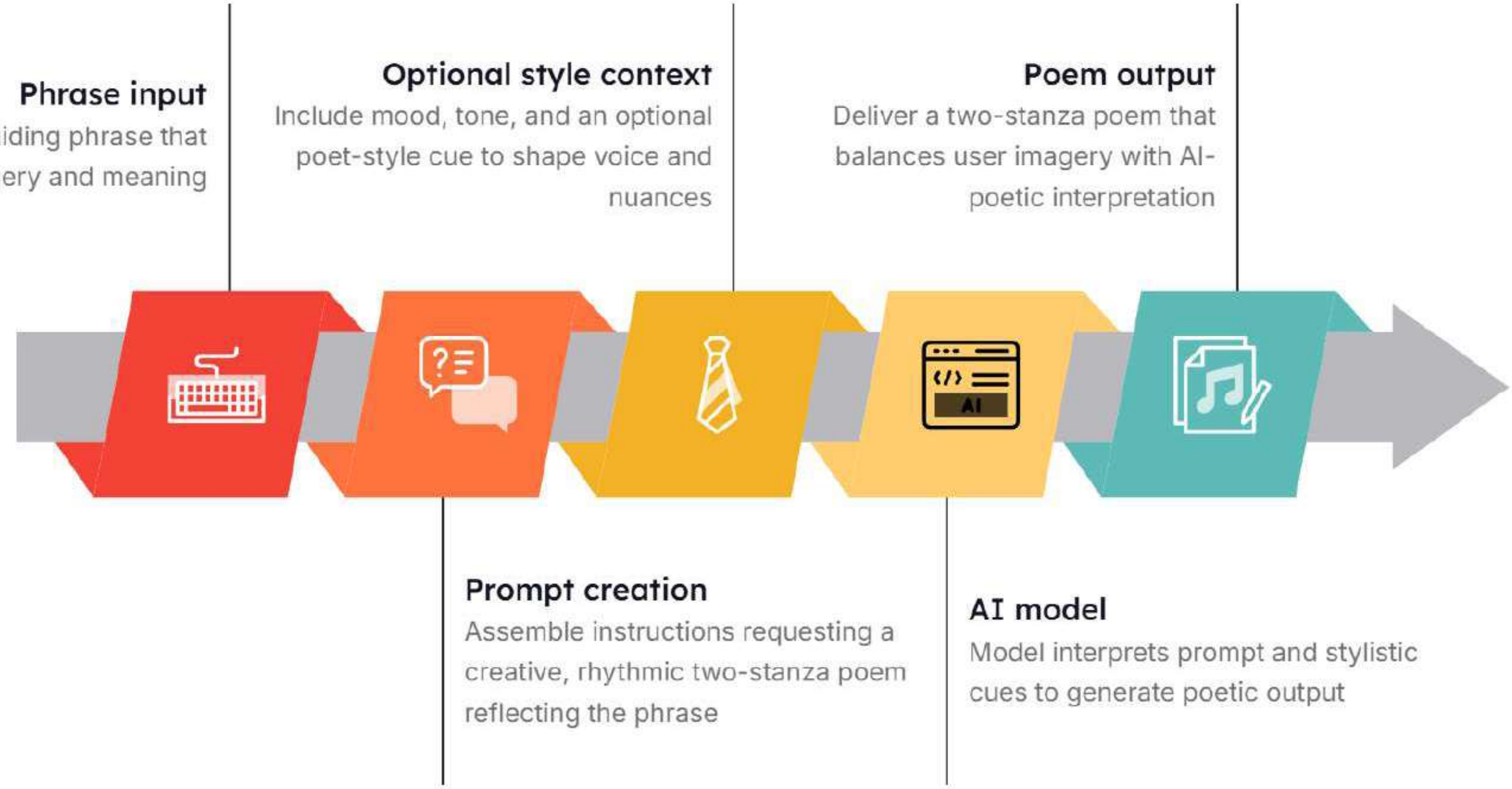
### Poem Output

05

Receive a two-stanza poem tailored to the user's emotional and stylistic preferences

# Phrase-Based Poem Function

Convert a user phrase into a focused two-stanza poem via a controlled prompt pipeline



### Phrase input

User supplies a guiding phrase that anchors imagery and meaning

### Prompt creation

Assemble instructions requesting a creative, rhythmic two-stanza poem reflecting the phrase

### Optional style context

Include mood, tone, and an optional poet-style cue to shape voice and nuances

### AI model

Model interprets prompt and stylistic cues to generate poetic output

### Poem output

Deliver a two-stanza poem that balances user imagery with AI-poetic interpretation

# Adaptive Interface Logic for Poem Generator

Dynamic input groups, streamlined controls, single-action generation

- Mode selection via **radio button** toggles between emotion-based and phrase-based poem generation
- Relevant input groups appear dynamically; irrelevant fields **hide** to reduce clutter
- Single **Generate** button triggers poem creation and displays the result
- Learner-friendly UX: simplified choices, reduced cognitive load, faster task completion
- Responsive feedback: inputs validate and update UI state without page reloads
- Accessibility note: radio controls and dynamic regions should support keyboard and screen readers

01

**Web-based access** with no local setup required; runs in any modern browser

02

**Clear input organization** that structures prompts and parameters for fast iteration

03

**Readable output textbox** that presents the generated poem for easy review and editing

04

**Real-time interaction** supporting immediate feedback and iterative refinement

05

**Built-in sharing** for collaboration, demos, and wider access in educational/creative settings

06

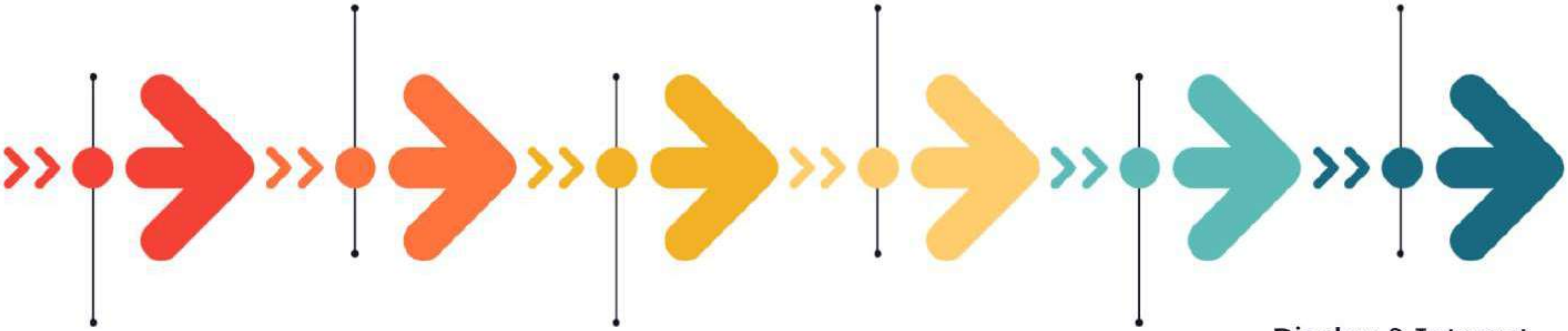
**Low overhead demos** ideal for presentations, workshops, and classroom use

# Gradio UI: Instant, Shareable Poetry Interface

Clean browser interface that organizes inputs, displays generated poem, and enables easy sharing for collaboration and demos

# How It Works — Poem Generation Flow

From user input to personalized poem delivered in seconds via the Nebius AI model



### Choose Source

Select generate by **emotion** or by **phrase**, defining creative direction

### Provide Details

Enter **mood**, **style**, and **rhyme scheme** to guide tone and structure

### Compose Prompt

App builds a structured prompt combining selected options and details

### Send to Nebius AI

Prompt is submitted to the **Nebius AI** model for fast composition

### Receive Poem

Nebius AI returns a personalized poem within seconds

### Display & Interact

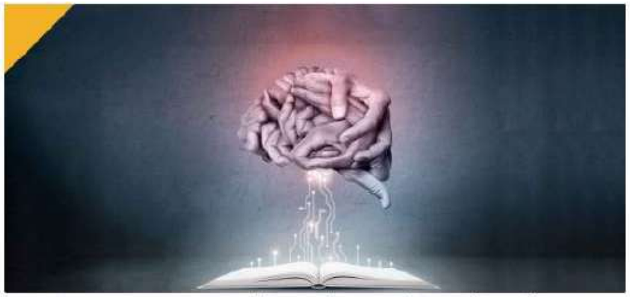
Interface immediately shows the poem for an engaging, interactive experience

# Conclusion: AI Poem Generator — Classroom Creativity Meets Code

A compact, hands-on tool to teach AI concepts through literary creation

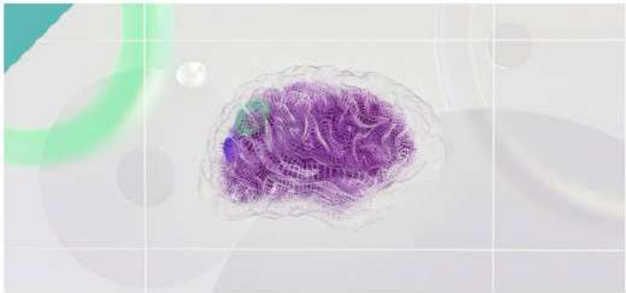
01 Accessible, easy-to-use tool for blending **coding** and **art**

02 Ideal for classroom demonstrations of AI in the **arts**



03 Supports exploration of technology-literature fusion and **creative thinking**

04 Builds practical **programming skills** alongside artistic expression



05 Encourages deeper engagement with AI's **creative potential**