GPS – AI-based Project Ideas & Guidelines

Tools to Use

You are encouraged to **experiment and be creative**!

- The main tools for this project are:

- **Seedream 4.0** (ByteDance) → powerful for generating initial scenes in high resolution.

  o https://seed.bytedance.com/en/seedream4_0

- **Nano Banana** → excellent for maintaining character/object consistency during edits.

  o https://nanobanana.ai/

- **Flux Kontext** → strong for local, context-aware edits and fine adjustments.

  o https://flux-context.org/

- However, if you discover other **interesting or innovative AI tools** that could enhance your work, feel free to use them **in addition to the three presented above**.

The goal is to **explore, compare, and push your creativity further**.

If you need to purchase a subscription, please group as many people as possible on the same account, to keep costs as low as possible.

Example Project Structure (using all 3 tools)

Task: Create a short visual story in 7-10 frames where a character or scene evolves over time.

1. Generate the base scene with **Seedream 4.0**.

2. Make medium-level edits (clothing, expressions, colors) with **Nano Banana**.

3. Apply local/contextual edits (background, objects, details) with **Flux Kontext**.

4. Document prompts used, tools applied, and compare results.

5. Deliverables: **PowerPoint presentation** (visual story + explanation) and **written documentation** (analysis + conclusions).

Proposed topics

1. *"The Metamorphosis of a Character"*

Create a visual mini-story (7-10 images) showing the transformation of a character over time (e.g., child → adult → superhero).

- **Seedream 4.0**: initial image.

- **Nano Banana**: edits to transform the character step by step.

- **Flux Kontext**: final environmental/context edits.

- *The order of using AI tools does not matter!*

- **PPT:** each slide = image + short explanation.

- **Documentation:**
  - compare how each AI handled consistency and creativity.
  - analysis of tool performance in keeping or changing scene elements.

2. *"The City Through Time"*

Create 7-10 images of the same place (square, building, street) shown in different eras: ancient, present, and futuristic.

- **Seedream 4.0**: base scene.

- **Nano Banana**: add details for each era (people, vehicles, clothes).

- **Flux Kontext**: futuristic transformation of the environment.

- *The order of using AI tools does not matter!*

- **PPT:** chronological progression of the city.

- **Documentation:**
  - compare how each AI handled consistency and creativity.
  - analysis of tool performance in keeping or changing scene elements.

3. *"Stories of an Object"*

Choose a simple object (book, chair, lantern, clock) and place it in 7-10 completely different contexts (e.g., underwater, space, jungle, futuristic lab).

- **Seedream 4.0**: base image.

- **Nano Banana**: consistency edits across contexts.

- **Flux Kontext**: local creative edits (extra details, lighting, secondary objects).

- *The order of using AI tools does not matter!*

- **PPT:** slides as a "journey of the object."

- **Documentation:**
  - compare how each AI handled consistency and creativity.
  - analysis of tool performance in keeping or changing scene elements.

4. **"A Robot's Dream"** – show what a robot might dream about, from a mechanical workshop to surreal landscapes.
5. **"Twin Planets"** – create two imaginary planets with contrasting environments (futuristic vs post-apocalyptic).
6. **"From Day to Night"** – transform the same street across morning, noon, sunset, and midnight.
7. **"The Journey of a Fantastic Creature"** – a dragon/bird shown in different settings: mountains, city, space.
8. **"The Room with Many Personalities"** – one room depicted in minimalist, gothic, cyberpunk, and natural styles.
9. **"Story in a Painting"** – reinterpret a famous painting in multiple styles (realism, anime, sci-fi).
10. **"Festival of the Future"** – futuristic festival with technology, music, crowds, and glowing decorations.
11. **"The Hero in Four Worlds"** – the same character placed in a jungle, medieval town, futuristic city, and desert.
12. **"The Magic Book"** – a book with pages opening into different worlds (forest, ocean, galaxy).
13. **"The Impossible Vehicle"** – design surreal vehicles (flying car, underground ship, space train).
14. **"The Time Shop"** – a mysterious shop shown in three eras: ancient, modern, future.
15. **"The Architect's Dream City"** – the same city drawn in Renaissance, modern, and sci-fi styles.
16. **"My Avatar in Many Worlds"** – create the same avatar in anime, realism, painting, low-poly styles.
17. **"The Interactive Stage"** – same theater stage with changing decorations (romantic, tragedy, sci-fi, fantasy).
18. **"The Object with Memory"** – an item (key, chair, clock) in ancient, medieval, modern, and futuristic contexts.
19. **"The Mutable Garden"** – a garden changing across four seasons or four fantasy worlds.
20. **"Digital Metamorphosis"** – a human face transforming into different artistic styles (realism → painting → cyberpunk → low-poly).
21. **"The Traveler's Suitcase"** - A single suitcase shown in 7-10 different locations around the world (airport, desert, snowy mountain, futuristic city).
22. **"The Evolution of a Playground"** - Depict the same playground across time: medieval, 20th century, present day, and future.
23. **"The Four Elements"** - Create a character or object that embodies fire, water, earth, and air, each in a unique scene.
24. **"The Lost Temple"** - Show a mysterious temple discovered at dawn, explored at noon, glowing at night, and finally overgrown by nature.
25. **"The Food of Tomorrow"** - Imagine traditional dishes (pizza, burger, sushi) reinterpreted in futuristic, robotic, or alien versions.
26. **"The Music Machine"** - Design a surreal instrument and depict it being played in four environments: classical concert hall, street, underwater, space.
27. **"The Dreamy Train Journey"** - A train that travels not through cities, but through surreal worlds (clouds, underwater, lava field, galaxy).
28. **"When Animals Rule"** - A city where animals live like humans — show 7-10 everyday scenes (dogs at a café, cats in offices, elephants on buses).
29. **"The Color Dimension"** - Take one scene and reimagine it dominated entirely by red, blue, green, and yellow worlds.
30. **"The Portal Series"** - A single glowing portal that opens into different realms (fantasy forest, cyberpunk city, desert planet, ocean world).

Project Flexibility & Creativity

You are free to **choose any of the 30 proposed themes** for your project. But remember: **you are *not limited* to these!**

- If one of the listed themes doesn't inspire you,

- Or if you have your **own creative idea** that fits the course goals

You are encouraged to **invent your own theme** and explore it!

What matters most is:

- Using **Seedream 4.0, Nano Banana, and Flux Kontext** in your workflow.
- Creating a **visual story (7-10 images)**.
- Preparing both a **PowerPoint presentation** and a **short documentation**.

Be bold, be imaginative, and don't be afraid to surprise us with something new!

Documentation Guide

1. Cover Page
- Project title
- Student name(s)
- Master's specialization
- Course: Graphics Processing Systems
- Supervisor: As.Drd.Ing. Bianca Guşiţă

2. Introduction
- Project theme
- Purpose of the project
- Objectives

3. Tools Overview
- **Seedream 4.0** – description & role
- **Nano Banana** – description & role
- **Flux Kontext** – description & role

4. Methodology
- Workflow explanation
- Order of tools used
- Prompts (examples included)
- Screenshots / intermediate results (optional)

5. Results
- Final images (in order)
- Short description for each image (what changed, which AI used)

6. Analysis & Comparison
- Strengths/weaknesses of each tool
- Quality, speed, consistency, creativity
- Issues encountered (artifacts, loss of detail)

7. Conclusions
- Lessons learned
- Ideas for extensions (e.g., more scenes, animations, hybrid workflows)

8. References
- Official tool websites
- Any articles/tutorials used

Length: **5–8 pages** (If you have multiple pages, it's not a problem!).
PPT: **6–10 slides** image + short text per slide (If you have multiple slides, it's not a problem!).

Evaluation Criteria

- ✓ **Creativity** – 45%
- ✓ **Technical correctness** (use of prompts & all 3 tools) – 15%
- ✓ **Presentation (PPT)** – 20%
  - o *3-5 minutes online presentation*
- ✓ **Documentation** – 20%

Submission deadline:

- ➢ week 12 (16 December)
- ➢ week 13 (13 January)
- ➢ week 14 (20 January)