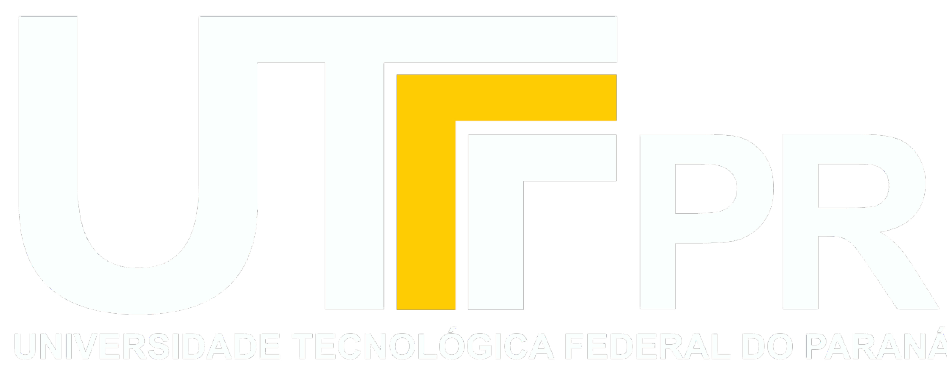


VAPOR-WAVE GRAPHICS, DOMAIN SPECIFIC LANGUAGE

Helberth Garcia. Autor¹*

²Universidad Distrital Fransisco Jose de Caldas
*hagarciam@udistrital.edu.co
*0000000000000001
*0000-0000-0000-0001

ID: EVNT2025-0001



Inserir Logo:
Org. Promotora

Inserir Logo:
Inst. Parceira

INTRODUCTION

This poster presents the MVP of a domain-specific language (DSL) designed for generating images and visual elements in the vaporwave aesthetic. The DSL was implemented in Python using PyParsing, enabling users to describe graphical compositions in a simple and intuitive syntax.

Key motivations:

- Explore the intersection of programming languages and visual art;
- Provide a minimalist and nostalgic tool for image generation;
- Develop a prototype focused on clarity and extensibility.

INFORMAÇÕES E DICAS SOBRE $\text{T}_{\text{E}}\text{X}/\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$

- $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ Project[¶].
- Comprehensive $\text{T}_{\text{E}}\text{X}$ Archive Network (CTAN)[¶].
- $\text{T}_{\text{E}}\text{X}$ Users Group (TUG)[¶].
- $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ — Wikibooks[¶].
- $\text{T}_{\text{E}}\text{X}$ - $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ Stack Exchange[¶].

LITERATURE REVIEW

The intersection of domain-specific languages and generative art has been explored in previous works:

- Implicit reference: ... (McCormack2005).
- Explicit reference: Hudak1996 discussed the value of DSLs in capturing domain knowledge effectively.

Citações e referências podem ser inseridas neste documento usando os comandos do pacote Bib $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ [¶], conforme exemplos no arquivo-fonte deste modelo. Os dados de cada referência podem ser obtidos de um arquivo Bib $\text{T}_{\text{E}}\text{X}$ [¶] (*.bib), geralmente na própria página de acesso ou download da publicação (artigos, livros, etc.) ou, ainda, a partir do Google Acadêmico, etc.

FERRAMENTAS PARA GERAR OU EDITAR ENTRADAS BIB $\text{T}_{\text{E}}\text{X}$ [¶]

- ZoteroBib [¶].
- Bib $\text{T}_{\text{E}}\text{X}$ Editor[¶].

MATERIALS AND METHODS

The DSL will be build using:

- Python for rapid prototyping;
- PyParsing to define grammar rules;
- A simple interpreter to convert DSL scripts into graphical outputs using PIL (Pillow).

$$\frac{dy}{dx} = \gamma \operatorname{sen} x$$

A Equação (1) foi inserida usando o ambiente $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ equation e numerada automaticamente:

$$f(x) = \frac{1}{\alpha} \int_0^L \left(\frac{x^2}{2} - \frac{x^3}{3} \right) dx \quad (1)$$

FERRAMENTAS PARA GERAR OU EDITAR EQUAÇÕES EM $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$

- Formula Sheet[¶].
- $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ Equation Editor (*by* Tutorials Point)[¶].

RESULTS AND DISCUSSION

The MVP of the DSL successfully allows the user to generate vaporwave-style compositions using simple commands. The following figure shows a sample output created using the DSL:

Figura 1 – Sample image generated with the DSL

Fonte: own work (2025)

RESULTS AND DISCUSSION (CONTINUED)

Figura 2 – Command-to-Output Diagram

Fonte: own work (2025)

Figura 3 – Syntax Tree of Sample Command

Fonte: own work (2025)

Tabela 1 – Commands and Visual Results

Command	Shape	Color
circle(...)	Circle	Pink
rect(...)	Rectangle	Blue
gradient(...)	Background	Purple

Fonte: own work (2025)

FERRAMENTAS PARA GERAR OU EDITAR TABELAS EM $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$

- Tables Generator[¶].
- $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ Tables Editor[¶].

CONCLUSIONS

- Developed a functional MVP of a DSL for vaporwave graphics.
- Demonstrated the ability to parse and render aesthetic visuals via code.
- Laid groundwork for future extensions, such as animations and user-defined styles.

REFERÊNCIAS