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**Avant Zero**

Random data-generating algorithm for (experimental)

Quake III Machinima (post)-production

**FUNCTIONAL DESIGN REPORT**

**Table of Contents**

Chapter 1: Background p. 00

Chapter 2: Goals and Objectives p. 00

Chapter 3: User Roles p. 00

Chapter 4: Functional Requirements p. 00

Chapter 5: Data Handling p. 00

Chapter 6: Limitations p. 00

Appendix A: High-level Roadmap p. 00

**List of Terms and Abbreviations**

**Python**

A versatile, high-level, general-purpose programming language; well known for its readability and expansive toolset for machine learning, scripting, algorithms, artificial intelligence, web development, stand-alone web applications and data analysis.

**CLI**

Abbrevation standing for *‘Command Line Interface’*; a piece of software that requires text commands for command/software initialization and execution instead of a graphical interface (containing menu’s, buttons and other graphical representations)

**Algorithm**

Software containing a specific and custom-made set of rules to get data such as media and/or input from point A (input) towards point B (output).

**Machinima**

Combination of the words ‘machine’ and ‘cinema’; a popular artform for participatory media creation since the late 1990’s/early 2000’s. Literal meaning: the creation of digital films inside videogame engines (often by utilizing videogame assets, code adjustments, code execution and game modification programs)

**Avant Garde**

Popular artform that develops new or experimental concepts or techniques; often associated with the arts[[1]](#footnote-1)

**Dominion Algorithm**

A random data generator for experimental Quake III machinima with limited functionality. Predecessor of the Avant algorithm. Initially created in late 2022 – early 2023 with the JavaScript language. Now considered legacy and defunct.

**Proof of Concept**

A version of specific software with limited functionality and scope to prove the feasibility of a concept or idea. AvantZero is considered a ‘proof of concept’ and only provides limited functionality compared to Avant – which is the full version of AvantZero and currently, as of July 2025, still in active development.

**Chapter 1 – Background**

**Chapter 2 – Goals and Objectives**

1. Merriam-Webster. (n.d.). *Avant-garde*. In *Merriam-Webster.com dictionary*. Retrieved July 9, 2025, from <https://www.merriam-webster.com/dictionary/avant-garde> [↑](#footnote-ref-1)