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GPU Accelerated Method for Constructing and Rendering Trees

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Abstract

This project aims to convert and extend the Lindenmayer-system based tree construction method presented by (Prusinkiewicz et al., 1996) to be used as an independent OpenGL module. The module should allow the addition of trees to a real-time environment with minimal user interaction, avoiding the difficulties and expenses of manually producing tree models.

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Prusinkiewicz, P., Hammel, M., Hanan, J., and Mech, R. (1996). L-systems: from the theory to visual models of plants. In *Proceedings of the 2nd CSIRO Symposium on Computational Challenges in Life Sciences*, volume 3, pages 1–32. Citeseer.