ABSTRACT

In 1968, Aristid Lindenmayer introduced Lindenmayer system are often called L-system. L-system are formal languages that are arranged with a rewrite to describe the system of fractal, model, and stimulate the development of plant in two dimension field. By defining parameters, symbols, axioms, rules of growth. This final project presents the making of the rule L-system using the algorithm of canny edge detection. The plant which examined the rules of production was soy bean plant.

The plant will be taken pictures of its trunk branching is minimal when the plant enter a phase of flowering. Pictures that have been taken will be processed with canny edge detection algorithm for that only the stalks are meticulous in production rules. Then, traced branching stems to get the production rules from those plant. The result of the final project will provide data analysis of the rule L-system of branching stems the soy beans and modelling it.

Keywords: L-system, canny edge detection, python, camera, soybeans