# PROJECT REPORT

## Automated hydroponic rooftop using Ldr and Raindrop Sensor

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**Faculty of Computer Science**
**Soegijapranata Catholic University**
**2020**

# HALAMAN PENGESAHAN

| | | |
|---|---|---|
| Judul Tugas Akhir: | : | Automated Hydroponic Rooftop Using Ldr And Raindrop Sensor |
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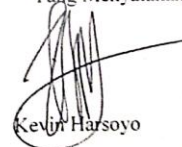Program Studi       : Teknik Informatika

Facultas             : Ilmu Komputer

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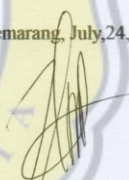Yang Menyatakan

Kevin Harsoyo

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## STATEMENT OF ORIGINALITY

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# ABSTRACT

*Hydroponic is new way to farm now because of efficienct and easy to do, but theres several problem and challenges to do this method. Some of them are;*

1. *Too much sunlight makes leaf withered. When condition worst, twigs and leaf will fall out although it looks green and healthy. But hydroponic plants still need sunlight to grow. Proper sunlight makes hydroponic plant grow faster than other common soil plant.*

2. *Rain make hydroponic nutrient messy and then plant does not get right ammount of nutrient.*

3. *Farming hydroponic need more comitment and care, if owner was busy or forget to fill water nutrient plant will runs out of nutrient and grow slower or withered*

*Theres several condition to prevent this several problems are;*

*During the daytime sunlight shine brightly and hot. How to prevent this are made automatic roof that can block or prevent direct sunlight to the hydroponic plants.When its too bright sensor ldr will work and servo will turn to close the roof. If sunlight is not shine as bright like daytime sensor will check and servo will open the roof. Thats all depends to the sensor sensitivity setup.*

*The other conditions are when weather goes raining, rain drop sensor will work and servo will close roof to prevent rain drop filling and dissolve with nutrient. When rain stop and sensor rain drop goes dry, servo will work and open the roof.*

*In this experiment theres two kind of dummy, which is one placed below automaticly roof and the other one is without automatic roof but both plants are treated equally from same seeds, same nursery and same nutrient. This experiment begin when seeds grow have three leaf at least.*

*Final result of this research is to know using automatic roof are more useful and efficient than common hidroponic.*

*Keyword: hydroponic, roof, nutrient, rain, sunlight.*

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