

# *The Digging Bot*

*Embedded Systems*

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## Team - 3

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# Problem statement

- To create a Bot for digging holes of specific diameter according to the given field plan.



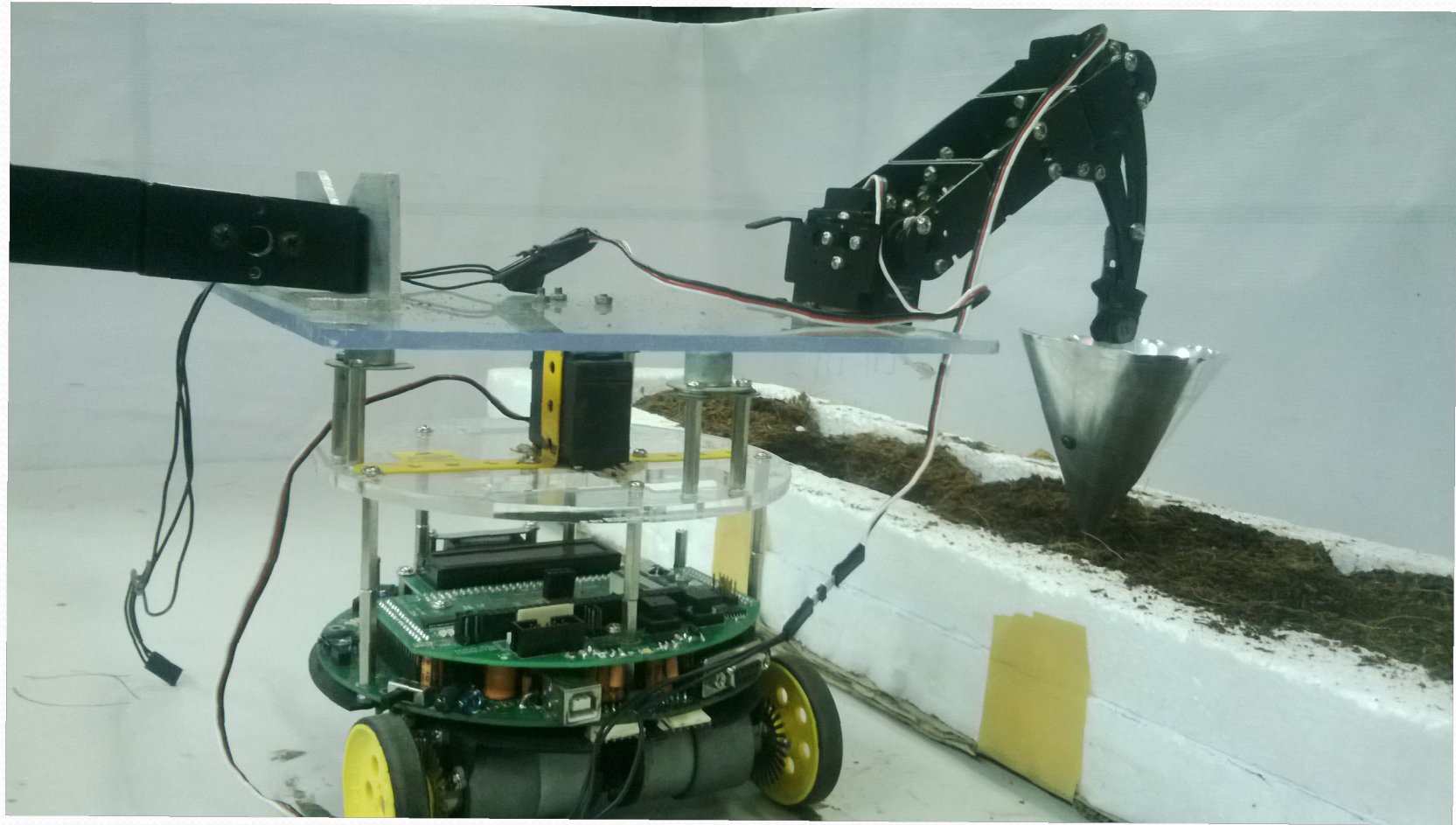
# Requirement specification

- Bot to dig holes in soil.
- The bot should be capable of digging holes of different diameters.
- The bot should follow a field plan for digging.
- Diameters of holes should be verified.

# Final system

- Digging arm with two servo motors.
- Conical head for varying diameter.
- PHP based user interface to enter the field plan.
- Camera mounted for taking images of holes for processing.





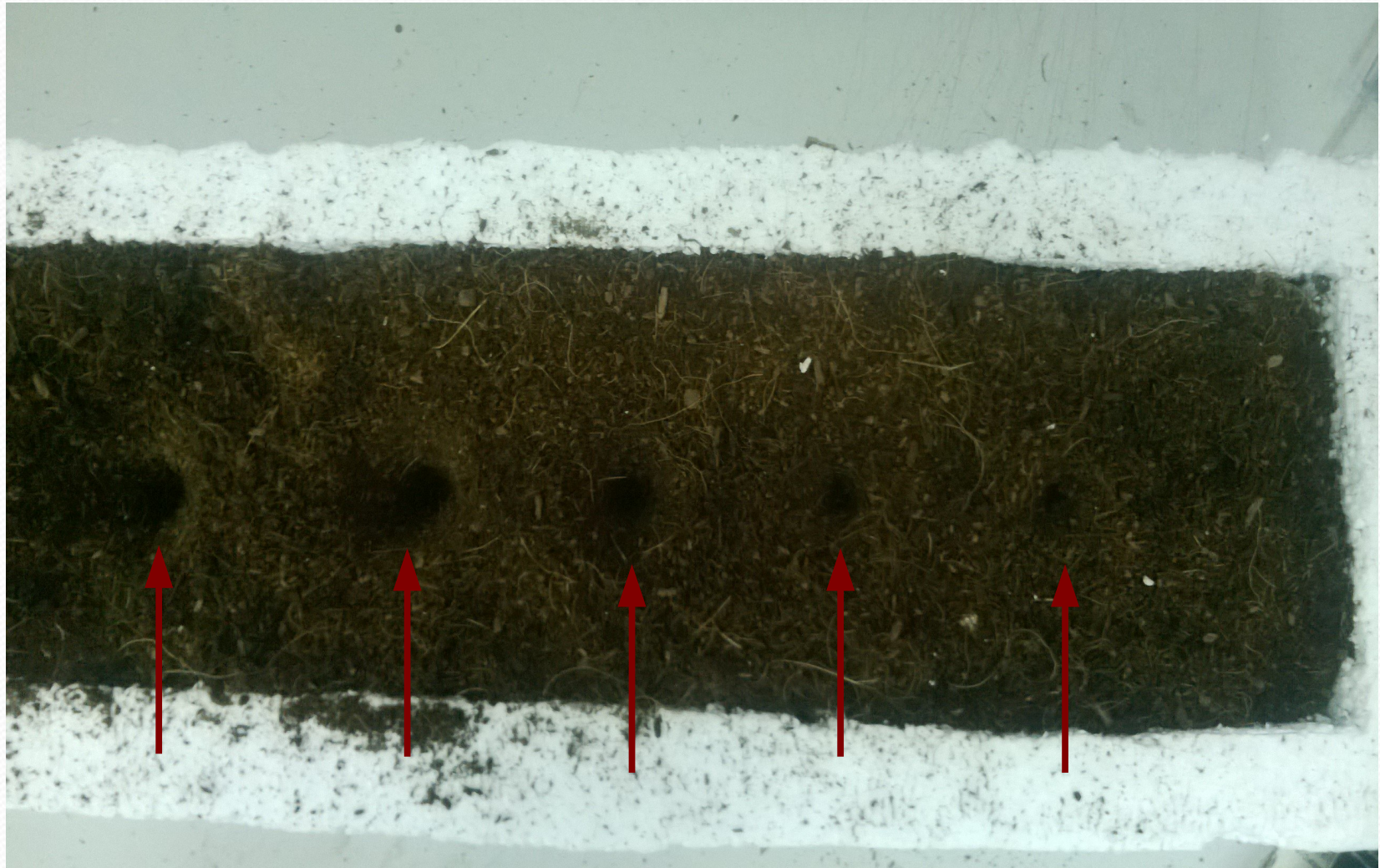


# Issues encountered

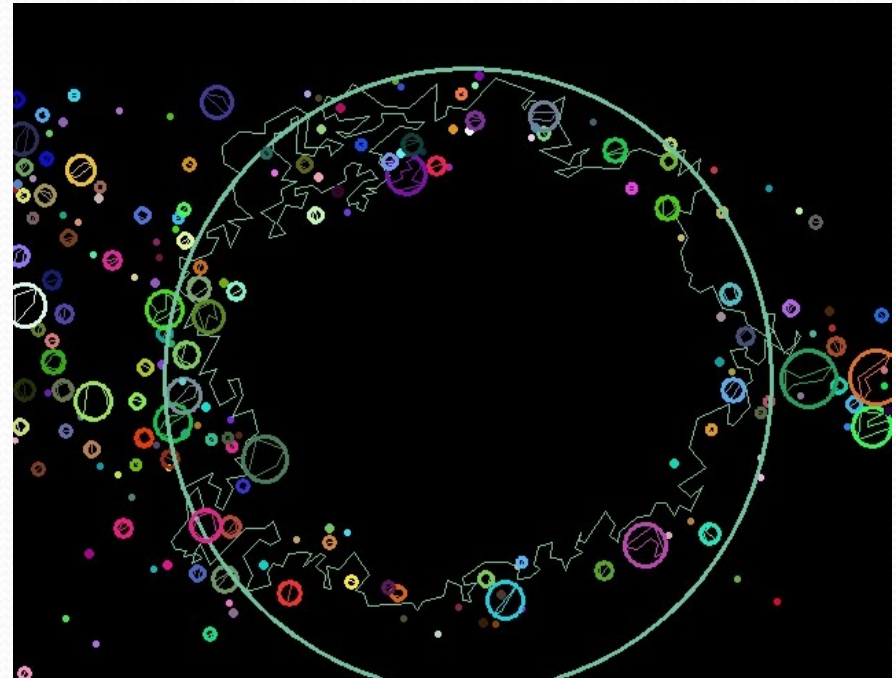
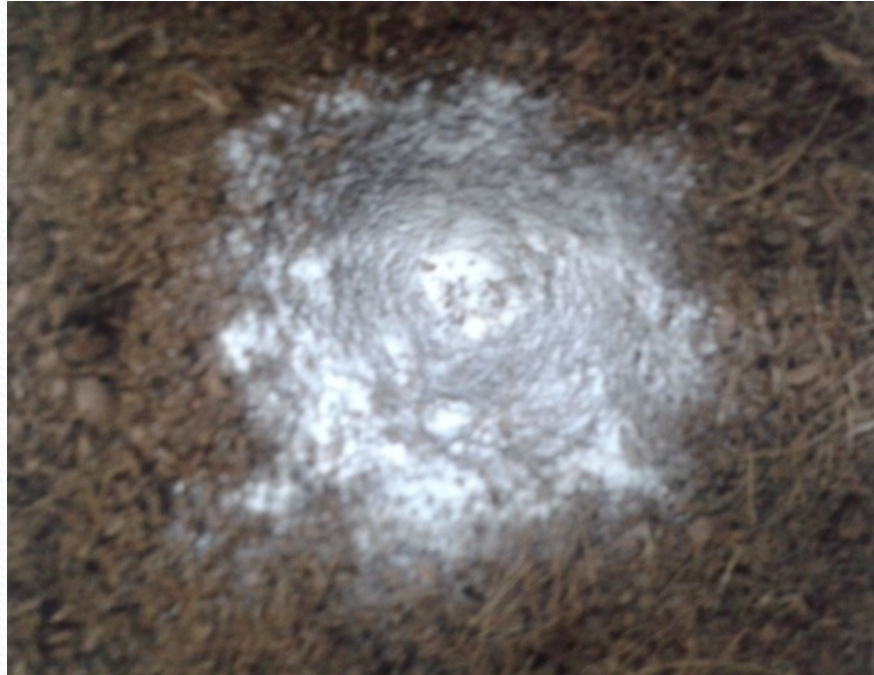
- Hole detecting using image processing.
- Problems with Interrupt handling.
- Image acquisition using wireless cam.



# Holes of Different Sizes









# Insights gained

- Communicating via serial ports.
- Image processing using OpenCV.
- First hand learning of real time implementation and its challenges.



# Future work

- Implementing rotating drill.
- Map based user friendly interface
- Adding the seeding feature.





Thank you





Q & A ?