



Smart Waste Container

Students: San Chui(EE), Jingtian He(CPE), Freda Huang(CSE), Hanjie Yao(CPE)

Advisor: Professor Henry Lee

Department of Electrical Engineering and Computer Science

Background

People hesitate on which category their waste belongs to and inevitably make mistakes when separating them. With our design, the general public/users no longer need to spend time separating waste. The waste disposal and recycling service can have higher overall efficiency.

Project Goal

The goal of this project is to design and construct a waste bin capable of separating the waste into different categories by using image recognition.

Required Material

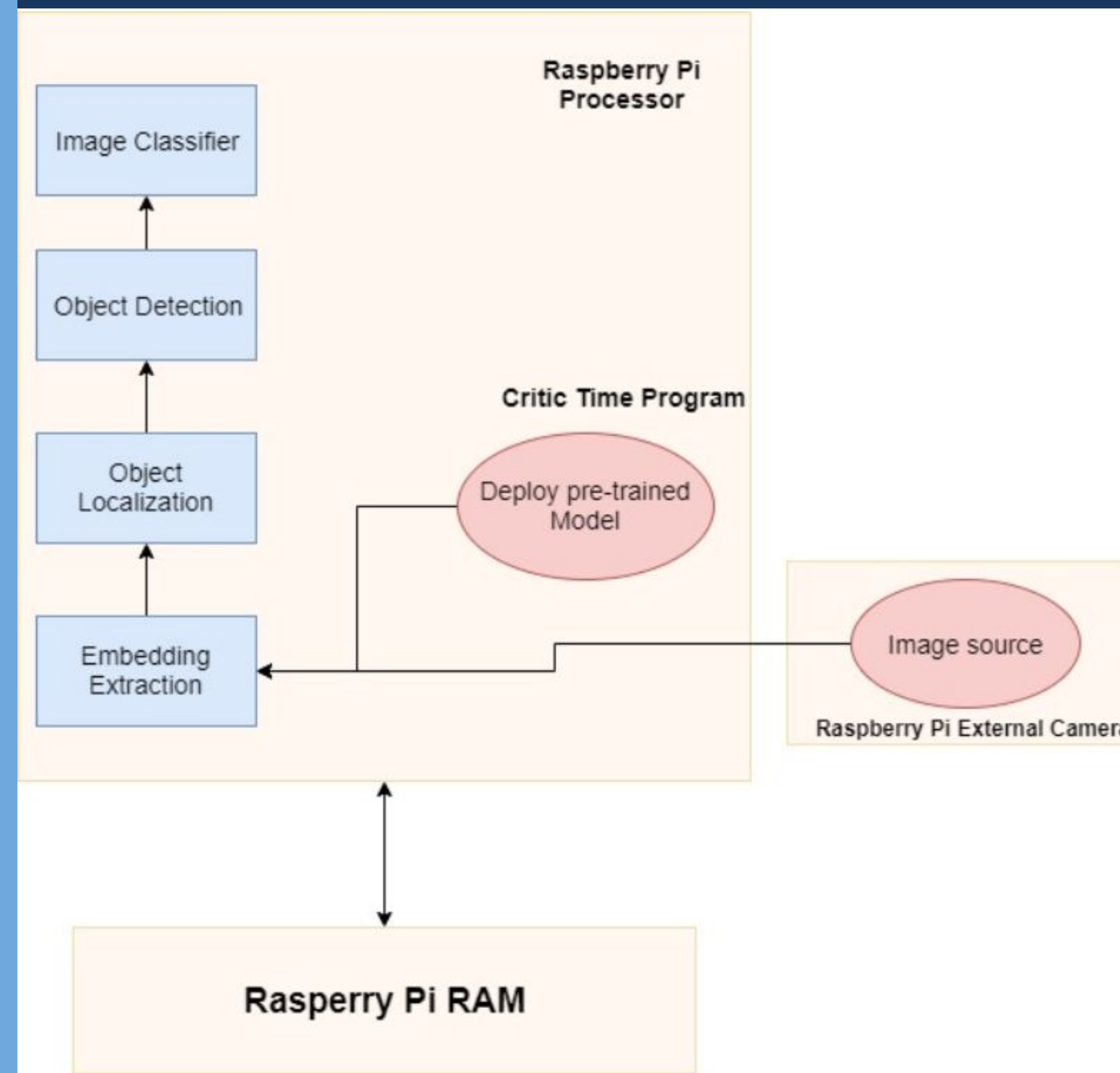
Hardware

- Raspberry Pi
- Camera
- Motor
- Waste Bins
- Power Source

Software

- Python
- Image AI
- Pytorch

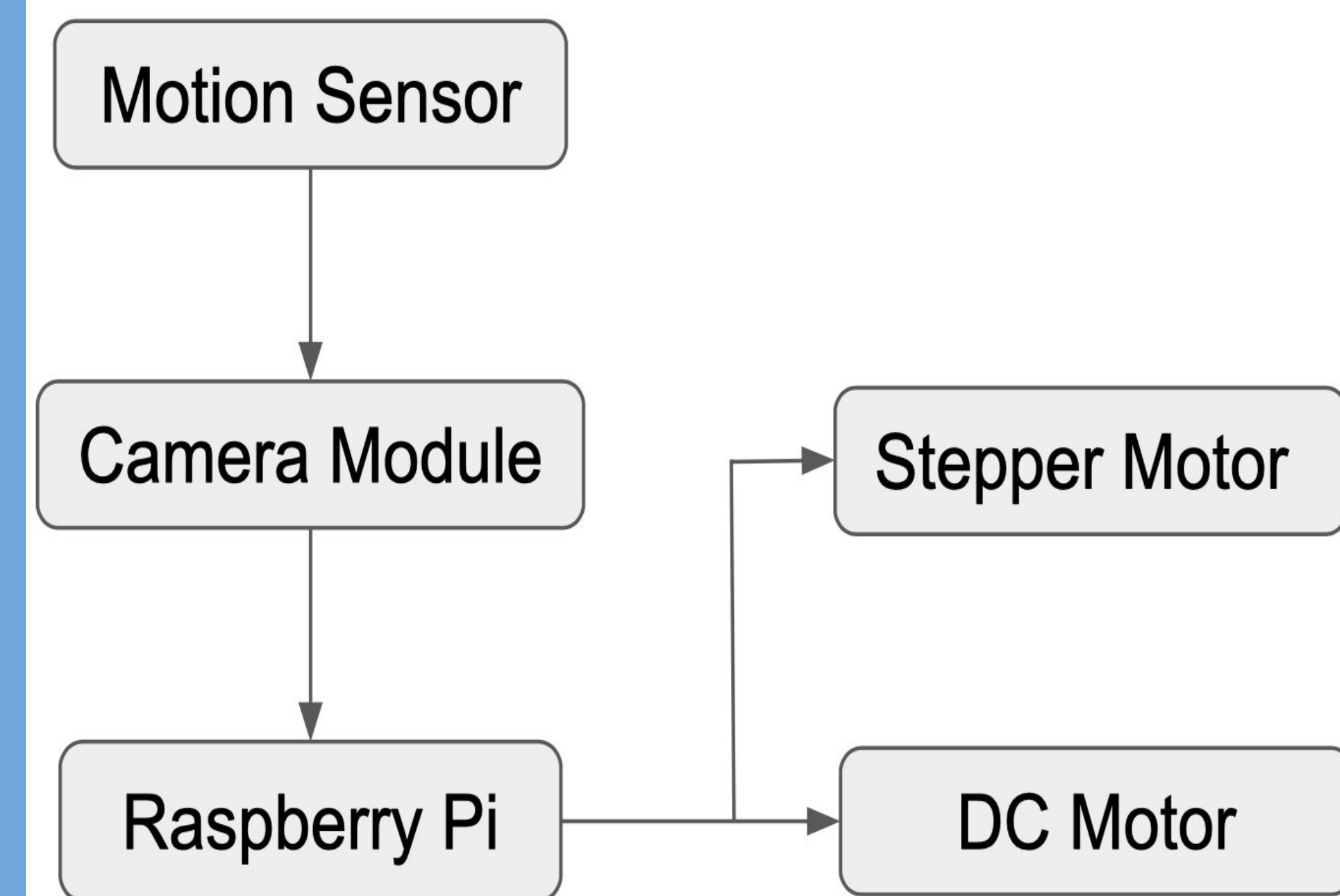
Software Diagram



Project Timeline

- 11/18: Construct the waste bin
- 11/23 Deploy the code to Raspberry Pi
- 12/2: Assemble the waste bin and link relative components
- next quarter: Improve and finalize the product

Hardware Diagram



Accomplishment

- Purchase required material
- Finish relative image recognition code

References

- [1]https://www.researchgate.net/publication/271964625_Development_of_Automatic_Smart_Waste_Sorter_Machine
 [2]<https://ieeexplore.ieee.org/abstract/document/7021812>

