

## ABSTRACT

# A DESIGN OF HUMANOID ROBOT MOVEMENT AUTOMATION SYSTEM BASED ON RASPBERRY Pi

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Digital transformation replaces conventional methods with digital technology, as realized through the Raspberry Pi that allows the creation of a Digital Public Service Robot (RPPD). Public services could be accessed through various ways, such as coming to the office to communicate directly with the officer (receptionist), contacting by phone, email, social media, or using a specific device. Humanoid robots, with their ability to human-like abilities, are part of the effort to create a more complex and human-like service experience. With the Digital Public Service Robot (RPPD), welcoming guests can be easier. This research used components namely Single Board Computer (SBC) Raspberry Pi 3, a Proximity Sensor placed on the front of the robot that functions as a detector of the presence of objects, Speakers as sound output, Actuators using Servo Motors, Stepdown used to lower the voltage, LCD to display information media, and Power Amplifier to amplify the sound signal. The customer welcoming robot is one of the service robots that has a high level of complexity.

**Keywords:** Robot, Public Service, Internet of Things (IoT), Raspberry Pi 3, Humanoid Robot.

