

## DAFTAR GAMBAR

<b>Gambar 2. 1</b> Internet of Things[3] .....	6
<b>Gambar 2. 2</b> Sensor Ultrasonic HC-SR04[8] .....	9
<b>Gambar 2. 3</b> Buzzer.....	9
<b>Gambar 2. 4</b> NodeMCU ESP8266[8].....	10
<b>Gambar 3. 1</b> Diagram Blok .....	15
<b>Gambar 3. 2</b> Desain Hardware .....	17
<b>Gambar 3. 3</b> Flowchart Proses Penggunaan Alat.....	18
<b>Gambar 3. 4</b> Flowchart NodeMcu.....	19
<b>Gambar 3. 5</b> Flowchart Telegram Bot.....	20
<b>Gambar 3. 6</b> Skenario Pengujian Validasi Jarak .....	21
<b>Gambar 4. 1</b> Implementasi Telegram Bot.....	23
<b>Gambar 4. 2</b> Desain Hardware 1 .....	24
<b>Gambar 4. 3</b> Desain Hardware 2 .....	24
<b>Gambar 4. 4</b> Throughput Jarak 5cm.....	25
<b>Gambar 4. 5</b> Delay Jarak 5cm .....	25
<b>Gambar 4. 6</b> Throughput Jarak 5-10cm .....	26
<b>Gambar 4. 7</b> Delay Jarak 5-10cm.....	26
<b>Gambar 4. 8</b> Throughput Jarak 20-30cm .....	27
<b>Gambar 4. 9</b> Delay Jarak 20-30 cm.....	27
<b>Gambar 4. 10</b> Throughput Jarak 10-20 cm .....	28
<b>Gambar 4. 11</b> Delay Jarak 10-20 cm.....	28
<b>Gambar 4. 12</b> Throughput Jarak 30-50 cm .....	29
<b>Gambar 4. 13</b> Delay Jarak 30-50 cm.....	29
<b>Gambar 4. 24</b> Rekapitulasi Hasil Pengujian .....	30
<b>Gambar 4. 26</b> Pengujian Throughput .....	31
<b>Gambar 4. 27</b> Pengujian Delay .....	32