

DAFTAR ISI

| | |
|---|----------|
| KATA PENGANTAR | 1 |
| ABSTRAK..... | 2 |
| ABSTRACT..... | 3 |
| DAFTAR ISI..... | 4 |
| DAFTAR GAMBAR | 6 |
| DAFTAR TABEL..... | 8 |
| DAFTAR LAMPIRAN..... | 9 |
| BAB 1 PENDAHULUAN | 1 |
| 1.1 LATAR BELAKANG..... | 1 |
| 1.2 RUMUSAN MASALAH..... | 3 |
| 1.3 TUJUAN..... | 3 |
| 1.4 BATASAN MASALAH..... | 3 |
| 1.6 JADWAL PENGERJAAN | 5 |
| BAB 2 TINJAUAN PUSTAKA | 7 |
| 2.1 KONSEP DASAR APLIKASI | 7 |
| 2.1.1 <i>Daging</i> | 7 |
| 2.1.2 <i>Electronic nose</i> | 8 |
| 2.1.3 <i>Artificial Intelligence (AI)</i> | 8 |
| 2.1.4 <i>Machine Learning</i> | 9 |
| 2.1.5 <i>Neural Network</i> | 10 |
| 2.1.6 <i>Confusion Matrix</i> | 11 |
| 2.1.1 <i>Root Mean Square Error (RMSE)</i> | 12 |
| 2.1.7 <i>R Squared (R²)</i> | 12 |
| 2.1.8 <i>Raspberry PI 3</i> | 13 |
| 2.1.9 <i>Spesifikasi Raspberry PI 3</i> | 14 |
| 2.1.10 <i>Sensor MQ</i> | 16 |
| 2.1.11 <i>Sensor Suhu dan Kelembapan (DHT-11)</i> | 18 |
| 2.1.12 <i>Arduino Uno</i> | 19 |

| | | |
|-------|--|-----------|
| 2.2 | TOOLS PERMODELAN APLIKASI | 20 |
| 2.2.1 | <i>Business Process Model and Notation (BPMN)</i> | 20 |
| 2.2.2 | <i>UML</i> | 22 |
| 2.2.3 | <i>Use Case Diagram</i> | 22 |
| 2.2.4 | <i>Class Diagram</i> | 24 |
| 2.2.5 | <i>Entity Relationship (ERD)</i> | 25 |
| 2.3 | ALAT PEMBANGUNAN APLIKASI | 25 |
| 2.3.1 | <i>Python</i> | 25 |
| 2.3.2 | <i>Library Python Scikit-Learn</i> | 26 |
| 2.3.3 | <i>MySQL (My Structure Query Language)</i> | 26 |
| 2.4 | TEKNIK PENGUJIAN TESTING..... | 27 |
| 2.4.1 | <i>BlackBox Testing</i> | 27 |
| | BAB 3 ANALISIS DAN PERANCANGAN | 28 |
| 3.1 | ANALISIS | 28 |
| 3.1.1 | <i>Gambaran Sistem Saat ini</i> | 28 |
| 3.1.2 | <i>Gambaran Aplikasi Sejenis</i> | 29 |
| 3.1.3 | <i>Gambaran Sistem Usulan</i> | 29 |
| 3.1.4 | <i>Analisis Kebutuhan Sistem</i> | 29 |
| 3.1.5 | <i>Kebutuhan Perangkat Keras dan Perangkat Lunak</i> | 31 |
| 3.2 | PERANCANGAN..... | 33 |
| 3.2.1 | <i>Model Aplikasi Berbasis Objek</i> | 33 |
| 3.2.2 | <i>Perancangan Basis Data</i> | 39 |
| 3.2.3 | <i>Perancangan Antarmuka</i> | 41 |
| | BAB 4 IMPLEMENTASI DAN PENGUJIAN..... | 44 |
| 4.1 | IMPLEMENTASI | 44 |
| 4.1.1 | <i>Implementasi Pembangunan Model</i> | 44 |
| 4.1.2 | <i>Implementasi Tampilan Antar Pengguna</i> | 47 |
| 4.2 | PENGUJIAN | 50 |
| 4.2.1 | <i>Black Box Testing</i> | 50 |
| | BAB 5 KESIMPULAN | 55 |
| 5.1 | KESIMPULAN | 55 |
| 5.2 | SARAN | 55 |
| | DAFTAR PUSTAKA..... | 57 |