

## **DAFTAR ISI**

|                               |      |
|-------------------------------|------|
| TUGAS AKHIR.....              | i    |
| LEMBAR PENGESAHAN.....        | i    |
| ABSTRAK .....                 | ii   |
| <i>ABSTRACT</i> .....         | iv   |
| KATA PENGANTAR.....           | vii  |
| DAFTAR ISI .....              | ix   |
| DAFTAR GAMBAR.....            | xii  |
| DAFTAR TABEL .....            | xiv  |
| DAFTAR SIMBOL.....            | xv   |
| DAFTAR ISTILAH.....           | xvii |
| BAB I PENDAHULUAN.....        | 1    |
| I.1 Latar Belakang .....      | 1    |
| 1.2 Perumusan Masalah .....   | 3    |
| 1.3 Tujuan Penelitian .....   | 3    |
| 1.4 Batasan Penelitian .....  | 3    |
| 1.5 Manfaat Penelitian .....  | 4    |
| BAB II TINJAUAN PUSTAKA ..... | 5    |
| II.1 Covid-19.....            | 5    |
| II.2 Vaksin .....             | 5    |
| II.3 Twitter.....             | 6    |
| II.4 Data .....               | 6    |

|   |    |
|---|----|
| II.5 <i>Text Mining</i> .....   | 7  |
| II.5.1 <i>Text Pre-Processing</i> .....                               | 8  |
| II.6 Analisa Sentimen .....   | 9  |
| II.7 <i>Metode Naive Bayes</i> .....                                  | 10 |
| II.7.1 Persamaan Metode Naive Bayes .....                             | 11 |
| II.7.2 Multinomial Naïve Bayes .....                                  | 11 |
| II.7.8 Pembobotan TF-IDF .....  | 12 |
| II.9 <i>Confusion Matrix</i> .....                                    | 12 |
| II.10 SMOTE .....   | 13 |
| II.11 <i>K-Fold Cross Validation</i> .....                            | 14 |
| II.12 Penelitian terdahulu.....                                       | 14 |
| II.12.13 Alasan Pemilihan Teori.....                                  | 18 |
| BAB III METODOLOGI PENELITIAN .....                                   | 19 |
| III.1 Sistematika Penyelesaian Masalah.....                           | 20 |
| III.2 Pengumpulan Data .....  | 21 |
| III.3 Pengolahan Data atau Proses Pengembangan Produk / Artifak ..... | 21 |
| III.4 Pre-Processing Text .....                                       | 22 |
| III.5 Metode Evaluasi .....   | 22 |
| III.6 Alasan Pemilihan Metode .....                                   | 23 |
| BAB IV ANALISIS.....  | 24 |
| IV.1 Pengumpulan data .....   | 24 |
| IV.2 Pelabelan Data.....  | 26 |

|  |    |
|--|----|
| IV.3 <i>Text Pre-prossesing</i> .....      | 27 |
| IV.3.1 <i>Emoticon Removal</i> .....       | 27 |
| IV.3.2 <i>Case Folding</i> .....           | 28 |
| IV.3.3 <i>Punctuation Removal</i> .....    | 28 |
| IV.3.4 <i>Tokenization</i> .....           | 29 |
| IV.3.5 <i>Stopword Removal</i> .....       | 30 |
| IV.3.6 <i>Stemming</i> .....               | 30 |
| IV.5. Implementasi Menggunakan TF IDF..... | 34 |
| BAB V HASIL DAN EVALUASI.....              | 36 |
| V.1 <i>Oversample</i> Data.....            | 36 |
| V.3.1 Hasil Akurasi .....                  | 44 |
| V.4 Melakukan Evaluasi Model .....         | 45 |
| BAB VI KESIMPULAN DAN SARAN .....          | 49 |
| V1. 1 Kesimpulan .....                     | 49 |
| VI.2 Saran .....                           | 50 |
| DAFTAR PUSTAKA .....                       | 51 |