

DAFTAR ISI

| | |
|--|------|
| HALAMAN PENGESAHAN..... | iii |
| PERNYATAAN..... | iv |
| PRAKATA..... | v |
| DAFTAR ISI..... | vii |
| DAFTAR GAMBAR | x |
| DAFTAR TABEL..... | xi |
| INTISARI..... | xii |
| ABSTRACT..... | xiii |
| BAB I PENDAHULUAN | 1 |
| 1.1. Latar Belakang | 1 |
| 1.2. Rumusan Masalah | 2 |
| 1.3. Batasan Masalah..... | 3 |
| 1.4. Tujuan..... | 3 |
| 1.5. Manfaat..... | 4 |
| BAB II TINJAUAN PUSTAKA..... | 5 |
| BAB III LANDASAN TEORI..... | 10 |
| 3.1. Sistem Rekomendasi | 10 |
| 3.2. <i>Item-based Collaborative filtering</i> | 10 |
| 3.3. <i>Cosine similarity Measure</i> | 12 |
| 3.4. <i>Euclidean distance</i> | 13 |
| 3.5. <i>Algoritme DBSCAN</i> | 13 |
| 3.6. Evaluasi | 16 |
| 3.6.1. K-Fold Cross Validation | 16 |

| | | |
|--|---|----|
| 3.6.2. | <i>Mean absolute error</i> | 17 |
| BAB IV ANALISIS DAN PERANCANGAN SISTEM | | 18 |
| 4.1. | Analisis Sistem | 18 |
| 4.2. | Rancangan Penelitian | 18 |
| 4.3. | Analisis Data | 19 |
| 4.3.1. | Training.csv..... | 19 |
| 4.3.2. | Testing.csv..... | 20 |
| 4.3.3. | Rancangan Pengolahan Dataset | 20 |
| 4.4. | Rancangan Implementasi <i>Clustering</i> pada Dataset | 22 |
| 4.5. | Rancangan Pembuatan Sistem Rekomendasi..... | 23 |
| 4.5.1. | Rancangan Chunk/Split data | 24 |
| 4.5.2. | Rancangan Proses Baca Data dan Matriks <i>Rating</i> | 24 |
| 4.5.3. | Rancangan Proses Perhitungan Nilai Similarity | 24 |
| 4.5.4. | Rancangan Proses Model Building | 25 |
| 4.5.5. | Rancangan Proses Generasi Prediksi | 26 |
| 4.6. | Rancangan Pengujian 10-Fold Cross Validation..... | 26 |
| 4.6.1. | Rancangan Parameter Uji..... | 27 |
| 4.6.2. | Rancangan Pengujian Perbandingan Performa | 27 |
| BAB V IMPLEMENTASI SISTEM..... | | 28 |
| 5.1. | Deskripsi Implementasi | 28 |
| 5.2. | Pengolahan dataset | 28 |
| 5.3. | Implementasi algoritme <i>clustering</i> | 31 |
| 5.4. | Sistem rekomendasi Item-based collaborative filtering | 33 |
| 5.4.1. | Proses data <i>split</i> | 34 |
| 5.4.2. | Pembacaan data matriks <i>rating</i> | 35 |

| | | |
|------------------------------------|--|----|
| 5.4.3. | Perhitungan <i>similarity</i> | 36 |
| 5.4.4. | Pembentukan model data | 38 |
| 5.4.5. | Prediksi rekomendasi | 40 |
| 5.5. | Evaluasi Sistem | 42 |
| BAB VI HASIL DAN PEMBAHASAN | | 45 |
| 6.1. | Hasil Pengujian Nilai <i>Epsilon</i> | 45 |
| 6.2. | Hasil Uji Penelitian | 46 |
| BAB VII KESIMPULAN DAN SARAN | | 53 |
| DAFTAR PUSTAKA | | 55 |
| LAMPIRAN | | 57 |