



## DAFTAR ISI

|  |     |
|--|-----|
| HALAMAN PENGESAHAN.....                    | i   |
| HALAMAN PERNYATAAN .....                   | ii  |
| KATA PENGANTAR .....                       | ii  |
| DAFTAR ISI.....                            | iv  |
| DAFTAR TABEL.....                          | vi  |
| DAFTAR GAMBAR .....                        | vii |
| DAFTAR LAMPIRAN.....                       | ix  |
| SARI .....                                 | x   |
| <i>ABSTRACT</i> .....                      | xi  |
| BAB I PENDAHULUAN.....                     | 1   |
| I.1. Latar Belakang .....                  | 1   |
| I.2. Rumusan Masalah .....                 | 2   |
| I.3. Maksud dan Tujuan.....                | 2   |
| I.4. Batasan Masalah .....                 | 2   |
| I.5. Manfaat Penelitian .....              | 3   |
| I.6. Peneliti Terdahulu .....              | 3   |
| I.7. Keaslian Penelitian.....              | 5   |
| BAB II TINJAUAN PUSTAKA.....               | 6   |
| II.1. Visualisasi Geosains .....           | 6   |
| II.2. Python .....                         | 7   |
| II.2.1. OpenCV.....                        | 7   |
| II.2.2. NumPy.....                         | 8   |
| II.2.3. Matplotlib.....                    | 8   |
| II.2.4. PyVista .....                      | 9   |
| II.2.5. Mayavi.....                        | 9   |
| II.2.6. PVGeo .....                        | 9   |
| II.2.7. GemPy.....                         | 10  |
| II.2.8. VTK.....                           | 10  |
| II.3. Visible Geology .....                | 11  |
| BAB III LANDASAN TEORI DAN HIPOTESIS ..... | 12  |



|  |            |
|--|------------|
| III.1. Landasan Teori .....              | 12         |
| III.1.1. Hukum Dasar Stratigrafi .....   | 12         |
| III.1.2. Struktur Geologi .....          | 14         |
| III.2. Hipotesis .....                   | 24         |
| <b>BAB IV METODE PENELITIAN .....</b>    | <b>25</b>  |
| IV.1. Alat Penelitian .....              | 25         |
| IV.2. Tahapan Penelitian .....           | 25         |
| IV.3. Jadwal Penelitian .....            | 32         |
| <b>BAB V HASIL DAN PEMBAHASAN.....</b>   | <b>33</b>  |
| V.1. Pemodelan 2 Dimensi .....           | 33         |
| V.1.1. Perlapisan Sedimen .....          | 33         |
| V.1.2. Lipatan .....                     | 35         |
| V.1.3. Sesar .....                       | 37         |
| V.1.4. Intrusi .....                     | 39         |
| V.1.5. Main Loop.....                    | 41         |
| V.2. Output 2 Dimensi .....              | 42         |
| V.3. Pemodelan 3 Dimensi .....           | 44         |
| V.4. Penyajian Model .....               | 46         |
| <b>BAB VI KESIMPULAN DAN SARAN .....</b> | <b>49</b>  |
| VI. Kesimpulan .....                     | 49         |
| VI. Saran.....                           | 49         |
| <b>DAFTAR PUSTAKA .....</b>              | <b>51</b>  |
| <b>LAMPIRAN .....</b>                    | <b>513</b> |