Remote Viewing Experiment - Changes and Updates

Major Changes Implemented

1. **Documentation Website Setup**
    - Created MkDocs-based documentation
    - Added comprehensive analysis examples
    - Organized technical documentation
2. **Analysis Pipeline Improvements**
    - Added cluster visualization improvements
    - Enhanced statistical validation
    - Added temporal quality analysis
    - Improved minimum distance comparisons
3. **Visualization Enhancements**
    - Added dendrograms for each cluster
    - Created distance matrix heatmaps
    - Added temporal quality plots
    - Improved cluster visualization layout
4. **Dataset Documentation**
    - Added Harvard Konklab dataset attribution
    - Documented image preprocessing steps
    - Added cluster analysis examples

How to Run the Analysis

1. **Complete Analysis Pipeline**

```
# Run full analysis from features
python scripts/run_analysis.py --start_from features
```

2. **View Documentation**

```
# Start documentation server
mkdocs serve
# View at http://127.0.0.1:8000
```

Key Results to Show

1. **Cluster Analysis**

- Show complete dendrogram (100 images)
- Highlight specific clusters (0, 5, 14, 19)
- Demonstrate diversity within clusters

2. **Statistical Validation**
   - Monte Carlo simulation results
   - P-value significance (0.001)
   - Effect size (0.842)
3. **Visualization Examples**
   - Distance matrix heatmap
   - Temporal quality plot
   - Individual cluster dendrograms

Directory Structure

```
remote-viewing-experiment/
├── docs/                      # Documentation
│   ├── examples/             # Analysis examples
│   ├── technical/            # Technical docs
│   └── assets/              # Images and outputs
├── src/                      # Source code
└── scripts/                  # Analysis scripts
```

Key Files to Show

1. **Analysis Examples** (`docs/examples/analysis.md`)
   - Shows complete analysis workflow
   - Includes all visualizations
   - Documents statistical results
2. **Technical Documentation**
   - Architecture overview
   - API reference
   - Configuration options
3. **Output Examples**
   - Cluster visualizations
   - Statistical results
   - Distance matrices

Running a Demo

1. **Start with Dataset**

- Show Harvard Konklab dataset
- Explain preprocessing steps
- Demonstrate feature extraction

2. **Show Clustering**

- Run clustering algorithm
- Show dendrogram formation
- Explain cluster selection

3. **Present Results**

- Show statistical validation
- Demonstrate cluster quality
- Compare with random baseline

Future Improvements

1. **Planned Enhancements**

- SBERT integration
- Additional visualization options
- Enhanced cluster metrics

2. **Potential Extensions**

- Interactive visualizations
- Additional statistical tests
- More cluster analysis tools

Questions to Address

1. **Methodology**

- Why ResNet-50 features?
- How are clusters formed?
- Why these statistical tests?

2. **Results**

- What do p-values mean?
- How to interpret dendrograms?
- Why these specific clusters?

3. **Implementation**

- How to modify parameters?
- How to add new features?
- How to extend analysis?