NLP Tool for YPAR Curriculum: Features Outline

1. Qualitative Data Processing

Text Preprocessing

Cleaning and standardizing text data from interviews and focus groups

Handling multilingual inputs (if needed for diverse communities)

Removing personally identifiable information for ethical compliance

2. Theme Extraction & Analysis

Topic Modeling

Automated identification of key themes from unstructured responses

Visualization of topic clusters and relationships

Customizable topic sensitivity for youth researchers

Sentiment Analysis

Detection of positive, negative, and neutral sentiments

Emotion recognition across responses

Cultural and contextual sensitivity calibration

Open-Ended Response Coding

Semi-automated coding suggestions for qualitative data

Collaborative coding interface for team-based analysis

Coding consistency checking and validation

3. Visualization & Reporting Tools

Interactive Dashboard

Real-time updates as new data is processed

Customizable visualizations of themes and patterns

Age-appropriate data representation methods

Quote Extraction

Identification of representative quotes for each theme

Contextual organization of quotes by topic

Bias-aware selection algorithms

Insight Generation

Automated summary of key findings

Identification of unexpected patterns or correlations

Guided exploration of qualitative insights

4. Ethics & Bias Mitigation

Bias Detection

Identification of potential biases in analysis

Calibration for cultural context and language variation

Transparency in confidence levels and limitations

Ethical AI Framework Integration

Automated anonymization of sensitive information

Educational components explaining NLP decisions

User-friendly documentation of methods