Project Summary

Three Main Scripts Created:

1. Data Collection Script (`twitter_scraper.py`)

- Purpose: Scrape Twitter data and save to CSV[1]
- What it does: Automatically collects 2000 tweets with job-related hashtags (#naukri, #jobs, #jobseeker, #vacancy)
- Technology: Uses Selenium WebDriver to browse Twitter and extract data[1]
- Output: Creates `twitter_job_analysis.csv` with columns:
    - Username, Tweet, Date, Time, Mentions, Hashtags
    - Likes, Retweets, Comments, Replies, Views

2. Analysis & Visualization Script (`comprehensive_analysis.py`)

- Purpose: Analyze CSV data and generate text reports with PNG visualizations[2]
- What it does: Reads the CSV file and performs detailed analysis[3]
- Analysis includes:
    - Sentiment analysis (positive/negative/neutral tweets)
    - Popular hashtags and keywords
    - Engagement patterns (likes, retweets, replies)
    - Peak activity times and days
    - User behavior patterns
- Output:
    - `comprehensive_twitter_analysis.png` (12-panel visualization dashboard)
    - `Comprehensive_Twitter_Job_Analysis_Report.txt` (detailed text report)

3. PDF Report Generator (`complete_pdf_generator.py`)

- Purpose: Create professional PDF reports with embedded visualizations[2]
- What it does: Generates comprehensive PDF reports with all 12 charts embedded
- Features:
    - Professional formatting with ReportLab

    - All 12 individual charts with descriptions
    - Executive summary and detailed analysis
    - Actionable recommendations
- Output:
    - `Twitter_Job_Analysis_Complete_Report.pdf` (comprehensive PDF with embedded charts)

Complete Workflow:

1. Run Script 1 → Collects Twitter data → Saves to CSV
2. Run Script 2 → Analyzes CSV data → Generates PNG dashboard + text report
3. Run Script 3 → Creates professional PDF report with embedded visualizations

Key Features:

- No paid APIs required - Uses free web scraping.
- Complete automation - Minimal manual intervention.
- Professional reporting - Charts, graphs, and actionable insights.
- Multiple output formats - PNG, TXT, and PDF reports.
- Comprehensive analysis - Sentiment, engagement, timing, and user behavior.
- PDF integration - All 12 charts embedded in professional PDF format.

Final Deliverables:

- CSV file with 2000 job-related tweets
- PNG dashboard with 12 different charts
- Text report with detailed analysis and recommendations
- PDF report with embedded visualizations and professional formatting

Technical Stack:

- Data Collection: Selenium WebDriver, Pandas3
- Analysis: TextBlob, NumPy, Matplotlib
- PDF Generation: ReportLab, Professional formatting
- Visualization: 12-panel comprehensive dashboard

All three scripts work together to provide a complete Twitter job market analysis solution with multiple output formats for different use cases.