Team Reflection: Building NewsBot Intelligence System

Team Collaboration Analysis

As a group of students tackling natural language processing for the first time, we were both excited and a bit intimidated by the NewsBot Intelligence System project. Early on, we set up a group chat to plan our approach and make sure everyone felt supported—no question was too simple! We decided to divide the work based on interests and learning goals. For example John focused on text preprocessing and sentiment analysis because they wanted to understand the foundations of NLP, while Dylan took on classification and NER, and Milagros handled TF-IDF and syntax parsing.

Technical Integration Challenges

Since most of us had never worked with this many libraries and steps in a single notebook, the biggest technical challenge was getting all the parts to talk to each other. Making sure the data moved smoothly from one module to the next was eye-opening. For example, after preprocessing, we accidentally fed the wrong column into the classifier, and it took some trial and error (and constant trips to ChatGPT) to fix it.

Another major learning curve was Colab's session timeouts. We learned the hard way to keep our dataset under 2,000 rows and to save our work often. Also, figuring out how to install and import packages (like spaCy and textblob) in Colab took some practice.

The group leaned on each other a lot for code review, sometimes just having someone else read your code line by line was enough to spot a bug or typo. Integrating the model and demo function at the end was our proudest moment because it worked on a real news article we found online.

Business Value Assessment

Through this project, we realized how useful NLP is in the real world, especially for busy people or organizations that need quick insights from tons of text. We could see how NewsBot could save journalists or analysts hours of manual sorting and help companies keep tabs on sentiment and emerging stories. Even as students, we saw the direct connection between our code and its potential value in newsrooms or business settings.

Individual Contributions

- **John Castor** Data setup, text preprocessing, sentiment analysis, presentation
- **Dylan:** TF-IDF feature engineering, syntax and POS analysis, notebook documentation
- **Milagros:** Classification modeling, NER implementation, group coordination
- **Ola:** Named Entity Recognition, notebook organization, notebook documentation

(We all reviewed and tested the final notebook and contributed to debugging and writing the README.)

Future Enhancements

If we had more time, we'd love to try a more advanced classification model (maybe SVM or even a transformer like BERT), and build a simple dashboard to let users upload new articles and get instant results. We also think it'd be cool to visualize entity networks or trending topics over time, so users could see not just what's in the news but how stories and entities connect.

Professional Development Impact

This project really boosted our confidence with Python, Colab, and real-world data science workflows. We learned that asking for help early is way better than struggling solo, and that clear documentation saves time for everyone. The experience made us appreciate how software projects in the real world are less about writing perfect code and more about teamwork, communication, and iteration. After completing this project, we all feel more prepared to take on bigger projects down the line.