

Executive Summary Project: NewsBot Intelligence System 2.0 Student: Ahmet Burak Solak Course: ITAI2373

1. Purpose I build a simple smart tool. It reads news text. It gives category, feeling, key names, and short summary. It helps people see many articles fast.
2. Problem There are many news articles. It is slow to read all by hand. We need quick sort and quick insight.
3. Solution I clean the text. I make features. I train one model (Random Forest). I also do sentiment and entity detection. I add a small chat style bot to ask simple questions.
4. Data BBC news training file with 5 groups: sport, business, politics, entertainment, tech.
5. Main Functions - Classify article category. - Show sentiment polarity (negative or positive) and subjectivity. - Extract names of people, places, groups. - Make short extractive summary. - Answer simple user queries (find, show categories, sentiment).
6. Result Model accuracy is good (above eighty percent). Categories are balanced. Politics and business have many articles.
7. Value Faster review of large news data. Basic insights for a user with little time. Simple base for bigger system.
8. Limits Only English now. Summary is simple. Search is basic. No live feed. No full translation yet.
9. Next Steps Add translation. Add topic model (LDA). Better summary method. Web app front end. Live updates.
10. Conclusion This project shows a clear simple pipeline. It works. It is easy to extend.