1. Intelligent Customer Support Chatbot (Retrieval + NLP Pipeline)

Industry Value: Used by banks, telecom, e-commerce.
Course Fit: NLP → Tokenization → Bag of Words → Naive Bayes.
Core Features:

- User query classification (complaint / refund / billing).
- Response generation using pre-defined templates.
- Sentiment detection for customer messages.
  Tech Used: Python, NLP preprocessing, NB classifier.

2. Smart Health Symptoms Checker (Rule-Based + ML Hybrid)

Industry Value: Healthcare triage systems.
Course Fit: Prolog rules + Naive Bayes classification.
Core Features:

- User enters symptoms → Rule-based reasoning suggests possible causes.
- ML model predicts risk level.
  Tech: Prolog + Python.

3. Job Applicant Shortlisting System (KNN + NLP)

Industry Value: HR departments use automated CV screening.
Course Fit:

- Text processing, vectors, KNN classification.
  Core Features:
- Upload CV text → NLP processing → Match to job role.
- Skill ranking & classification (match / mismatch).
  Tech: Python, BoW, TF-IDF, KNN.

4. AI-Based Grocery Market Basket Recommender

Industry Value: Used by Walmart, Carrefour, Daraz to increase sales.
Course Fit: Association Rule Mining (Apriori).
Core Features:

- Finds items frequently purchased together.
- Suggests "People also bought…" recommendations.
  Tech: Python, Apriori.

5. Facial Emotion Recognition (Basic ANN + Image Preprocessing)

Industry Value: Security systems, retail analytics.
Course Fit: ANN → Image processing → Classification.
Core Features:

- Detect happy, sad, angry, neutral faces using a mini dataset.
- Train simple neural network.
  Tech: Python, OpenCV, ANN.

6. Intelligent Assignment Plagiarism & Similarity Detector

Industry Value: Widely used in universities and research organizations.
Course Fit: NLP → Tokenization → Cosine similarity.
Core Features:

- Text cleaning + stemming + stopword removal.
- Detect similarity between student assignments.
  Tech: Python, NLP, TF-IDF.

7. Road Accident Risk Predictor (Logistic Regression / KNN)

Industry Value: Transport departments, insurance industry.
Course Fit: Supervised Learning → Classification.
Core Features:

- Predict accident risk level based on weather, time, vehicle type.
- Real dataset (public).
  Tech: Python, KNN.

8. Intelligent House Price Predictor (Regression + EDA)

Industry Value: Real estate & banking.
Course Fit: Regression algorithms + EDA.
Core Features:

- Apply regression to predict property prices.
- EDA: correlation, missing values, feature engineering.
  Tech: Python, Pandas, Matplotlib.

9. AI-Powered Resume ATS Score Generator

Industry Value: HR recruitment systems.
Course Fit: NLP → Naive Bayes → Text classification.
Core Features:

- Extract skills from resume.
- Match resume to job description.
- Provide ATS score.
  Tech: Python, NLP.

10. Intelligent Tourism Recommendation Agent

Industry Value: Travel companies & tourism boards.
Course Fit: Agent design → Rule-based reasoning → Search.
Core Features:

- User preferences (budget, weather, location).
- Utility-based agent suggests places + optimal route (A* search).
  Tools: Python, Search algorithms.

11. AI Inventory Demand Forecasting (Time-series + ML)

Industry Value: Used by retail shops, warehouses (Metro, Imtiaz).
Course Fit: ML regression + EDA.
Core Features:

- Load historical sales data.
- Predict next-month demand.
  Tech: Python.

12. Email Spam Classifier (Naive Bayes + NLP)

Industry Value: Used by Gmail, Yahoo, corporate email systems.
Course Fit: NB Classifier + Tokenization.
Core Features:

- Train classifier using labelled data.
- Predict spam/ham with accuracy.
  Tools: Python, Scikit-learn.

13. Intelligent Course Recommendation System for Students

Industry Value: LMS systems (Coursera/Edx).
Course Fit: Clustering + KNN + Knowledge-based reasoning.
Core Features:

- Student profile → Suggest next best course.
  Tech: Python, K-Means.

14. AI-Based Fraud Transaction Detector (KNN / Naive Bayes)

Industry Value: Banks & fintech.
Course Fit: Classification algorithms.
Core Features:

- Detect suspicious transactions using ML.
- Highlight anomalies.
  Tech: Python, Sklearn.

15. Multi-Agent Traffic Light Optimization System

Industry Value: Smart cities.
Course Fit: Agents → Utility-based decisions → Search.
Core Features:

- Agents represent traffic signals.
- Adjust signal duration using measured congestion.
  Tech: Python, Agents implementation.