IBM Internship Exercise: Event Feedback Analyzer

IBM puts smart to work. We are all hands-on and we love experimenting with technology and innovation. At IBM, we have a number of hackathons and events throughout the year – we are always learning, improving, and trying new things. This internship challenge follows the same spirit – we want you to experiment, be creative, and learn by doing.

Technical Challenge

You are helping a fictional platform called EventSync. It helps teams organize events like workshops, team buildings, or small conferences. After each event, participants leave written feedback. Your job is to build a backend application that accepts this feedback and automatically analyzes it using an AI sentiment analysis API (e.g., Hugging Face or AWS Comprehend). The system should classify each feedback as positive, neutral, or negative and provide a summary per event.

Your Solution Must

- Allow creation and viewing of events (title + description).
- Allow users to submit feedback for a specific event.
- Automatically analyze feedback sentiment using a free/open-source API.
- Store feedback and sentiments in memory or an embedded database like H2.
- Provide an API to view feedback count and sentiment summary per event.

Backend Implementation Details

You will create a RESTful API using Java and Spring Boot. Each event should be stored with a unique ID, a title, and a short description. Feedback submitted by users should be stored with a timestamp and linked to the corresponding event.

Suggested endpoints:

- POST /events – create new event
- GET /events – list all events
- POST /events/{eventId}/feedback – submit feedback for an event
- GET /events/{eventId}/summary – return sentiment breakdown for the event

AI Sentiment Analysis API Tips

Use an external API like Hugging Face to classify text feedback. You typically send a POST request with the text, and the API returns probabilities or labels such as 'positive', 'neutral', or 'negative'.

Example models you can try on Hugging Face:

- cardiffnlp/twitter-roberta-base-sentiment

- nlptown/bert-base-multilingual-uncased-sentiment

Consider (Optional)
Implement a simple UI (React/Angular, HTML, or other) to:

- Create events
- Submit feedback
- Show event sentiment summary

Containerize your app and deploy it to a free cloud platform.
Test your endpoints thoroughly using a mix of unit tests, integration tests, and automated documentation tools like Swagger/OpenAPI for easy inspection and testing of your REST APIs.

Expected Submission
Your solution should include:

- GitHub repository with your code
- README.md with setup and run instructions
- Optional: public link to deployed app
- Add valdas.trakumas@ibm.com as a collaborator

Evaluation Criteria

Criteria	Weight
Core features working	35%
Clean and understandable code	30%
Extra effort / creativity	20%
Presentation quality	15%

Additional Resources
- Hugging Face Inference API: https://huggingface.co/inference-api

- Spring Boot API guide: https://www.baeldung.com/spring-boot-start

- H2 In-Memory Database: https://www.h2database.com/

- Docker: https://docs.docker.com/get-started/

- Google Cloud Free Tier: https://cloud.google.com/free

- AWS Free AI Services: https://aws.amazon.com/free/ai/