# IBM Granite Model Integration with Java

This project demonstrates how to integrate and invoke \*\*IBM Watsonx.ai Granite Foundation Models\*\* using a \*\*Java HTTP client\*\*.

It uses a combination of autogenerated code (from IBM Cloud) and manual modifications to call a deployed Granite model for AI-driven responses.

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## 🚀 Project Overview

- \*\*Language:\*\* Java

- \*\*Model Used:\*\* IBM Granite (`granite-13b-chat-v2`) — deployed via Watsonx.ai

- \*\*Goal:\*\* Authenticate with IBM Cloud, send a prompt to the model, and print the response

- \*\*Use Case Example:\*\* AI assistant that generates natural language responses based on input prompts

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## 🧱 Technologies Used

- IBM Cloud IAM for token-based authentication

- IBM Watsonx.ai foundation model deployment

- Java `HttpURLConnection` for HTTP requests

- JSON parsing via string operations (minimal dependencies)

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## 📦 Setup Instructions

### 🔐 Prerequisites

1. \*\*IBM Cloud Account\*\* with access to Watsonx.ai

2. A \*\*Granite model deployment\*\* with a known Deployment ID

3. \*\*IBM Cloud API Key\*\*

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### 🔧 Configuration

In `WatsonGraniteClient.java`, replace the placeholders:

```java

String API\_KEY = "<YOUR\_IBM\_CLOUD\_API\_KEY>";

String scoringUrl = "https://us-south.ml.cloud.ibm.com/ml/v4/deployments/<YOUR\_DEPLOYMENT\_ID>/predictions?version=2021-05-01";