# JAGANARUL A

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## **Professional Summary**

AI-driven Java Developer with practical experience in designing and developing intelligent systems, including an AI-powered chatbot and fraud detection engine integrated into web platforms. Specialized in applying **NLP (Natural Language Processing)** techniques, rule-based logic, and heuristic analysis to build smart, responsive applications. Skilled in **Java, Spring Boot, RESTful APIs**, and **JSON** for robust backend development, combined with proficiency in **MySQL, JDBC, and Hibernate** for efficient data handling.

Well-versed in **HTML**, **CSS**, **JavaScript**, **and Thyme Leaf** for web integration of AI services. Familiar with **Git**, **GitHub**, and modern IDEs like **IntelliJ IDEA**, **Eclipse**, **and VS Code**. Passionate about AI technologies, currently advancing knowledge in **AI model design**, backend automation, and scalable architecture. Strong communicator with proven **problem-solving**, **time management**, **and collaboration** abilities Experience

#### Skills

- Languages: Java (Advanced), SQL (MySQL), HTML, CSS, JavaScript
- Frameworks & Libraries: Spring Boot, Spring Framework, Hibernate, JDBC, JPA, Thymeleaf
- AI & Intelligent Systems: NLP (Rule-Based Systems), Basic AI Model Design, Heuristic Analysis, JSON-based AI Response Handling
- Backend & APIs: RESTful API Design, JSON Data Handling, Secure API Integration
- Tools & IDEs: Intellij IDEA, Eclipse, Visual Studio Code, MySQL Workbench
- **Version Control & Collaboration:** Git (Branching, Merging), GitHub (Project Hosting & Collaboration)
- Web Integration: Responsive UI with Thyme leaf, HTML/CSS/JS integration with Java backend
- Soft Skills: Strong Communication, Analytical Thinking, Time Management, Team Collaboration
- **Current Focus:** AI-driven Java applications, Spring Boot API development, scalable backend architecture

## **Projects**

# 1. AI Chatbot for Online Banking System

#### **Technologies:** Java, JSON, NLP, Web Integration

- Designed and implemented a rule-based, text-driven AI chatbot using Java to simulate real-time banking assistance.
- Utilized ISON for dynamic response handling and structured conversation flow.
- Applied NLP concepts to interpret user queries and deliver context-aware replies.
- Integrated the chatbot into a responsive website interface for interactive banking support.

### 2. Generative AI Assistant using LLaMA 3.1

**Technologies:** Python, LLaMA 3.1, Hugging Face Transformers, JSON, REST APIs

- Developed a generative AI assistant using Meta's **LLaMA 3.1** model for natural language response generation.
- Utilized **Hugging Face Transformers**, **Auto Tokenizer**, and **Text GenerationPipeline** for efficient model handling and inference.
- Enabled **multi-turn dialogue** with **context retention** and dynamic memory management.
- Applied advanced **prompt engineering** techniques for task-specific response control and content filtering.

## 3. AI-Enhanced Personal Portfolio Website

**Technologies:** HTML, CSS, JavaScript, GitHub Pages

- Developed a personal portfolio featuring a custom AI chatbot for guided user interaction.
- Implemented JavaScript-based chatbot logic to help users navigate content dynamically.
- Deployed the site using GitHub Pages with full mobile responsiveness and performance optimization.

## 4. Beyond the Firewall - Demystifying Offline Device Security

**Technologies:** Embedded Security, Firmware, System Design

- Analyzed and identified physical security vulnerabilities in offline systems.
- Implemented robust protection strategies like secure boot mechanisms and firmware validation.
- Enhanced system resilience through detailed risk assessment and defense architecture planning

#### Education

#### **Bachelor of Engineering (Computer Science and Engineering)**

Priyadarshini Engineering College, Anna University CGPA: 8.02 | 2020 – 2024

#### **Higher Secondary Certificate (HSC)**

Universal Matriculation Higher Secondary School, Jolarpet

Percentage: 61% | 2019 - 2020

#### **Certifications**

- **SQL & Relational Databases** IBM Developer Skills Network (July 2024)
- Full Stack Web Development GUVI (September 2023)
- **Cybersecurity Fundamentals** Udemy (December 2023)
- Introduction to Networks CISCO Networking Academy
- TCS iON Career Edge Communication, Presentation & Interview Skills (June 2024)
- **Java Programming Masterclass** Udemy (june, 2025)
- AI for Everyone DeepLearning.AI (Coursera) (optional if taken or planned)
- **Prompt Engineering for LLMs** DeepLearning.AI (Coursera) (optional highly relevant to LLaMA)

• **Introduction to Generative AI** – Google Cloud Skills Boost (optional – very good for GenAI roles)

## **Additional Information**

- Open to relocation and available for immediate joining.
- Actively expanding expertise in **Artificial Intelligence**, focusing on chatbot development, fraud detection systems, and generative AI technologies.
- Continuously upskilling in **Spring Boot** and **RESTful API** development to strengthen backend capabilities and scalable architecture design.