

# DEEP PODDER

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## OBJECTIVE

AI/ML Engineer and BCA graduate specializing in building custom, data-driven solutions for businesses. I leverage expertise in Python, PyTorch, and Generative AI to develop intelligent systems for tasks like workflow automation, sentiment analysis, and predictive modeling. Seeking to collaborate on impactful freelance projects where I can apply my skills to deliver measurable results.

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## EDUCATION

Bachelor of Computer Applications (BCA)

Institute of Engineering and Management, Kolkata

(Expected Graduation: 2026)

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## INTERNSHIPS

AI Solutions Intern – Future Tech Wizard (*Mar 5, 2024 – May 6, 2024*)

- Developed an AI-powered Resume Processing & Job Matching Platform improving recruitment efficiency.
- Built a multi-method PDF parsing pipeline (LangExtract + pdfplumber + PyMuPDF) for robust resume data extraction with 85–90% accuracy.
- Designed TF-IDF & cosine similarity-based job matching algorithm, achieving 87% precision in recommendations.
- Implemented skills gap analysis & personalized learning paths, enhancing candidate career guidance.
- Deployed a FastAPI-based backend with JWT authentication, SQLAlchemy ORM, and scalable APIs supporting 100+ concurrent users.

## SKILLS

- Programming Languages: Python, Java, OOPs, Data Structures and Algorithms (DSA)
- Database: PostgreSQL, MySQL, ChromaDB
- Data Science Skills:
  - Python: Proficient in the language; used extensively for scripting, automation, and DSA problem solving.
  - Machine Learning: Hands-on experience with regression, classification, clustering algorithms (Linear/Logistic Regression, Decision Trees, Random Forests, SVM, K-Means); model evaluation, and hyperparameter tuning.
  - Deep Learning: PyTorch, implemented CNNs, RNNs, Transformers, experience with optimizers (Adam), loss functions, and model architecture design.
  - Natural Language Processing (NLP): Text preprocessing, TF-IDF, embeddings, semantic similarity, and AI-enhanced classification.
  - Generative AI: Practical experience with Google Generative AI API, Phi, LangGraph, LangSmith and other frameworks for content generation, semantic understanding, agent-based systems, and workflow automation.

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## PROJECTS

### RAG Application

- Built a Retrieval-Augmented Generation (RAG) chatbot using LLMs to answer customer and employee queries from policy documents and synthetic datasets.
- Implemented LangGraph state management for persistent conversational memory and Jina embeddings + ChromaDB for efficient document retrieval.

## Sales Recommendation Engine

- Built an AI-powered recommendation system to suggest products based on recent purchases and intended buys.
- Leveraged PostgreSQL for structured data storage, Redis for caching frequent results, and Kafka for real-time sales data streaming.
- Solved the problem of boosting cross-sell/upsell opportunities by delivering fast, personalized recommendations.

## PI/PHI Detector (Rally Ticket Integration)

- Designed and implemented a **data privacy detection tool** for identifying **Personally Identifiable (PI)** and **Protected Health Information (PHI)** within **Rally ticket data**.
- Automated data extraction from Rally using pyrally, streamlining **ticket ingestion workflows**.
- Developed **RESTful APIs** with **FastAPI** and defined precise data contracts using **Pydantic** models.
- Integrated **Agentic AI reasoning workflows** with **Ollama-hosted LLM** specifically **LLaMA** for **semantic analysis** and **context-aware detection** of sensitive content.
- Ensured scalability and robustness through **modular architecture** and **structured reasoning loops**.

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## CERTIFICATIONS

- **Azure DevOps for Beginners – LinkedIn, Aug 2024**
  - **Becoming an AI-First Product Leader – LinkedIn, Dec 2023**
  - **Introduction to Artificial Intelligence – LinkedIn, Dec 2023**
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