

Manas Bisht

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Experience

PRUDENTBIT

Founding Engineer

Noida, India

Aug 2024 – Present

- Led end-to-end development and deployment of scalable full-stack web applications aligned with business goals.
- Designed a secure, high-availability infrastructure using Nginx reverse proxy, VMs behind an Application Gateway, and automated SSL setup with Certbot.
- Optimized cloud architecture, reducing infrastructure costs by **40%**, and integrated Collabora WOPI for real-time document editing.
- Built CI/CD pipelines using GitHub Actions and shell scripts to automate testing and deployments.

Lead AI Engineer

Jan 2024 – Aug 2024

- Architected and led the development of a scalable, document-grounded RAG-based conversational AI system using **LangChain**, **OpenAI**, **HuggingFace**, and **ChromaDB**, supporting real-time semantic search through advanced **embedding and retrieval workflows**.
- Built a modular pipeline for **multi-format document ingestion** (PDF, DOCX, PPTX, TXT, CSV, XLSX), enabling automated conversion, extraction, semantic chunking, and **pandas-powered LLM agent integration** for natural language analysis of tabular data.
- Developed robust **prompt engineering strategies** to mitigate LLM hallucinations, with techniques including context constraints, fallback handling, tone normalization, and compliance-aware interaction logic (e.g., hardcoded responses to PII queries).
- Enabled conversational continuity using **chat history and context chaining**, improving coherence and user experience across sessions.
- Directed a cross-functional team of AI engineers and data scientists, ensuring alignment with technical standards, business objectives, and timely delivery of key milestones.
- Led the development of a **multilingual PII detection system** capable of identifying and redacting sensitive information across English, Arabic, and Devanagari, supporting **global privacy compliance**.
- Designed and deployed custom algorithms for complex identifiers such as **Aadhaar**, **PAN**, **credit cards**, and **passports**, optimized for multiple languages and regional formats.
- Architected a **modular AI platform** separating **PII detection and redaction** into independently deployable components, and exposed them via **RESTful APIs** to support scalable, real-time document processing in enterprise environments.
- Integrated **deep learning-based NLP models** to enhance entity recognition in noisy or unstructured documents, alongside **comprehensive logging, exception handling, and monitoring** for improved reliability and maintainability.

University of Tartu

Research Assistant Intern

Tartu, Estonia

Apr 2023 – Sep 2023

- Implemented topic modeling techniques including **Latent Dirichlet Allocation (LDA)** and **BERT Topic Modeling** to analyze large-scale text datasets.
- Applied **Named Entity Recognition (NER)** and **sentiment analysis** to extract and interpret relevant information from text-based data.

Education

Sharda University

2020 – 2024

B.Tech in Computer Science (Specialization in AI & ML)

- GPA: 7.8/10.0

Projects

TinyVGG: Image Classification with PyTorch

Github

(Personal)

- Developed and trained a **convolutional neural network (CNN)** based on the **TinyVGG** architecture to classify **FashionMNIST** images.
- Implemented custom training and evaluation loops, accuracy metrics, and model persistence using **PyTorch**.
- Achieved robust performance on unseen data, demonstrating skills in **deep learning** workflows, model optimization, and reproducible research.

Technologies & Skills

- **Languages:** Python, Java, SQL, Bash
- **Frameworks & Libraries:** FastAPI, Django, Django REST Framework (DRF), Streamlit, LangChain, Hugging Face Transformers, Scikit-learn, TensorFlow, OpenCV, NumPy, Pandas, Matplotlib, Librosa
- **AI/ML Concepts:** Retrieval-Augmented Generation (RAG), Named Entity Recognition (NER), PII Detection & Redaction, Topic Modeling (LDA, BERT), Classification Models (SVM, Random Forest, KNN, Decision Trees), Transfer Learning, Transformers, Xception Net, Natural Language Processing (NLP)
- **DevOps & Cloud:** AWS EC2, Azure Application Gateway, GitHub Actions, Nginx, Certbot, Collabora WOPI Server
- **Tools & Technologies:** Git, Postman, VSCode, CUDA (GPU Acceleration), REST APIs, SSL/TLS
- **Concepts:** CI/CD Pipelines, Access Control, Data Security & Privacy, Encryption, Scalable Web Architectures

Certifications

Google Cloud Certification

Machine Learning A-Z™: Python & R in Data Science

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