VINOD SAGAR

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WWW: Bold Profile

SUMMARY

Highly motivated and results-oriented Python developer with a strong foundation in building scalable web applications and data pipelines. Proficient in Django, Flask, and data engineering principles, leveraging AWS cloud services for efficient deployment and management. Adept at problem-solving and collaborating in fast-paced environments.

SKILLS

Python programming: advanced proficiency, OOP, async/await, pandas, type hints, pydantic

Web framework: Flask, Django, FastAPI, HTML, CSS

Hugging Face: Transformers, datasets, model hub, PEFT integration, accelerate for distributed training

Large language models (LLM): Anthropic Claude, Llama integration, inference optimization, multi-modal capabilities

Fine-tuning: LoRA/QLoRA, supervised fine-tuning, RLHF, domain adaptation, parameter-efficient training

Vector databases: Pinecone, Chroma, FAISS, similarity search, index optimization, metadata filtering

Embeddings: OpenAI embeddings, Sentence Transformers, semantic search, text chunking, multi-modal embeddings

Prompt Engineering: Few-shot learning, chain-of-thought, prompt optimization, template management, safety techniques

RAG (Retrieval-Augmented Generation): end-to-end pipelines, document processing, hybrid search, context management, evaluation metrics

Chatbot Development: Multi-turn dialogue, session management, personality design, error handling, API integration

Agentic AI: LangChain, LangGraph, multi-agent systems, tool integration, workflow orchestration

MCP (Model Context Protocol): Protocol implementation, context sharing, interoperability, and integration patterns

Docker: container creation, multi-stage builds, AI workload optimization, GPU-enabled containers, Docker Compose

AWS Cloud: Bedrock, Lambda, S3, EC2, boto3, CloudWatch, and serverless AI deployment

EXPERIENCE

AI ENGINEER | 08/2024 to Current
Freelance - **Bangalore**, **India**

Practical Applications.
End-to-End AI Solutions.
- Built production RAG systems combining vector databases, embeddings, and LLMs.
- Developed conversational agents using fine-tuned models and prompt engineering.
- Implemented multi-agent workflows for complex task automation.

Model Optimization.
- Fine-tuned, domain-specific models using Hugging Face transformers.
- Optimized embedding strategies for improved retrieval performance.
- Deployed scalable AI systems using Docker and AWS infrastructure.

Production Deployment.
- Containerized AI applications for consistent deployment across environments.
- Implemented cloud-native AI solutions with AWS services.
- Built robust chatbot systems with error handling and fallback mechanisms.

SOFTWARE ENGINEER | 08/2013 to 07/2023
HCL TECH - **Bangalore**, **India**

- Worked as Python Developer at Google India, January 2023 - July2023.
- Worked as Data Engineer at smith nephew, August 2022 - January2023.
- Worked as Django Developer at Smart DCC, Manchester, UnitedKingdom(onsite) and Bangalore. January 2019 to July 2022.
- Worked as Python Developer for Client CATTERPILLAR, Bangalore.

CAD CUSTOMIZATION ENGINEER | 08/2013 to 07/2017
HCL TECH(DAIMLER, VOLVO) - **Bangalore,, India**

- Worked as a CAD Automation Engineer using VB.NET at VOLVO, Bangalore, from December 2016 to November 2017(client location)
- Worked as CAD Automation Engineer for STELIA AEROSPACE,Bangalore, January 2016 to November 2016.
  (client location)
- Worked as a CAD Automation Engineer at DAIMLER (MERCEDES-BENZ Research and Development India, Bangalore), November 2013 to December 2015 (client location).
- Worked as a CAD Engineer at MSM Consultancy, Bangalore, and HCL Technologies, Bangalore, from November 2011 to May 2012.
- Asst. Design Engineer at BAKA LIFTEC (India) Private Limited, Bangalore.| 2010 - 2011

EDUCATION AND TRAINING

BIT - **Bangalore**
Bachelor of Engineering
Mechanical, **06/2008**

LANGUAGES

English: First Language

German:	A1	**Kannada**:	C2
Beginner		Proficient (C2)	
Hindi:	B2	**Telugu**:	B1
Upper Intermediate (B2)		Intermediate (B1)	
Tamil:	A1		
Beginner			

WEBSITES, PORTFOLIOS, PROFILES

- https://github.com/vinodsagar260981
- www.linkedin.com/in/vinod-sagar-b504b6111/

ACTIVITIES AND HONORS

- Wildlife photography
- Solo bike ride
- Trekking
- cooking
- Farming