

Akshay Kumar C P

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Experience

- May 2022 – Present **Consultant – Machine Learning Engineer, Capgemini Technology.**
- Built Retrieval Augment Generation (RAG) and prompt engineering based Generative AI application using OpenAI GPT-3.5-turbo model.
 - Research on Large Language Models and best practices for development.
 - Requirement gathering, Map Business requirement to technical requirements, deriving approach for solution implementation, co-ordinate with team members, etc.
 - Analyze Request for Proposal (RFP) document and capture technical components for further discussion.
- Jun 2019 – May 2022 **Software Development Engineer – Machine Learning, Flexera Software's.**
- Open-Source Software Analysis.
 - Automate manual tasks using python.
 - Identified problem statements in product and processes, respective solutions (listed in projects section) were implemented to solve the problem statement using Machine Learning.

Profile Summary

- Overall 4.6 years of experience in developing Generative AI & Machine Learning based application using various tools and frameworks.
- Skilled in Generative AI (Transformers, GPT 3.5-turbo 4k, Embedding model, open source LLM models, Prompt engineering, Retrieval Argument Generation (RAG), Quantization, Stable diffusion, etc.), Machine Learning Life Cycle, Python, etc.

Capgemini Projects

Legal Tender Document review

- Tech stack: GPT-3.5-Turbo LLM, text-embedding-ada-002 embedding model, Azure Cognitive Search vector store, Langchain & Prompt engineering.
- Used RAG based architecture and multiple prompts for performing Document review.
- Involved in requirement gathering, defining approach, performing multiple experiments under development of the solution.

Generate Synthetic Data

- Tabular: Utilized CT-GAN for synthetic tabular data generation.
- Images: Image synthesis using Open-source Stable Diffusion Models.

Personalized Marketing

- Personalize images using Open-source Stable Diffusion Models.
- Performed Fine Tuning using Dreambooth Framework.

Marketing content creation

- Use OpenAI GPT-3.5-Turbo Model and generate marketing content such as product description, etc. and personalized content for customer such as E-mail, SMS, etc.

Natural Language to SQL Query

- Implemented using OpenAI "txt-davinci-003" model.
- Build UI using Streamlit/Gradio framework for show casing quick demo.

AWS Clean Room & Amperity

- AWS Clean Room: Take marketing decision without third party cookies.
- Amperity: CDP for Identity resolution (IDR) and customer campaigns

Flexera Projects

Open-Source License Detection & Copyright Extraction

- Developed using Python, NLP, Spacy, ML, REST APIs, UWSGI Server & MongoDB.
- Increased component license mappings from 35% to 55%.
- Product was benefitted by identifying the precise copyright holder from license text.

Q&A Chatbot for HR

- Research & implementation on multiple chatbot platforms such as google Dialog flow, Amazon Lex, Microsoft Azure Luis, Rasa X, using Python & MongoDB.
- Chatbot answered FAQ on HR department and sends out the information to mail.

Automation Tools, Python automation projects.

- Download, extract releases of component, validate URL of component, etc.

Technical Exposure

Skill	Technology Known
Programming	Python
LLM	OpenAI GPT-3.5-Turbo, LLAMA 2, Mosiacml, Falcon, etc.
LLM techniques	Prompt engineering, Quantization, etc.
Vector Database	Azure Cognitive Search, Chroma, FAISS
Development Framework	Langchain, Django, Flask, FastAPI
Machine learning	Exploratory Data Analysis, Feature Engineering, Hyperparameter tuning, Model building, Ensemble Modelling, Model Evaluation Metrics, & Deployment etc.
Deep Learning	ANN, CNN, RNN, and Transformers, etc.
Chatbot	Amazon Lex, Microsoft Azure Luis, Rasa X, Google Dialog Flow
Data Base	MySQL and MongoDB
Key Industries	Marketing, Legal.
Web technologies	UWSGI server, REST API, Flask, HTML, JavaScript, Ajax, Bootstrap, WordPress, JSON etc.
Tools/IDE	VS Code, PyCharm, Spyder, Power BI desktop, Tableau public, photoshop, filmora, etc.
Version Control	GIT
Project Methodology	Agile (scrum)

Online Profile



<https://akshaykumarcg.github.io>



<https://www.linkedin.com/in/akshay-kumar-c-p>

Recognition & Certification

- Certificate of recognition in XTRAMILE for outstanding performance and lasting contribution in SEP 2022 for "Insight & Data" from CAPGEMINI TECHNOLOGY.
- Certificate of recognition for PASSION in ARTIFICIAL INTELLIGENCE from FLEXERA SOFTWARES.
- AWS Machine Learning Specialty.
- Microsoft Certified Azure: AI 102 and AI 900.

Education

Master of Computer Application (MCA), B.M.S. College of Engineering, Bangalore.