

# AAVISH GILBERT J

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## Education

### PES University - B.Tech

[2021 - 2025]

Computer Science Engineering - Specialization in Machine Intelligence and Data Science.

Bangalore, Karnataka

## Experience

### EKCS

[June 2023 - May 2024]

Generative AI Intern

Bangalore - Remote

#### Developed a custom RAG microservice for the HR Department:

- Currently serving **1000+** endusers with features like Autotraining, Citations, Cache, Reranking and Memory.
- Engineered architecture enhancements like Custom Text Splitter, Parallel Train/Questionnaire Pipeline and Webhooks and **Deployed** using Google Dialogflow, Google App Script on a Flask server with Nginx, Waitress and EC2.
- Recorded an average **RTT of less than 800ms** and monitored KPIs on Google Data Studio to optimize performance.

#### Created a Dynamic AD Generator using LLMs:

- Created **high-quality** tailored AD content for websites in HTML CSS and JS by finetuning on **proprietary AD data**.
- Implemented a system to input an ad type and generate similar ads of various dimensions while maintaining all elements, tags, hyperlinks, color schemes, styles, and animations **intact**.
- Fine-tuned **OpenAI models** and explored Google AI Studio's Gemini, Stable Diffusion, open-source LLMs like Llama2 and Mistral, techniques such as DPO Optimization, Quantization for **enhanced performance**.

### KukkesBot

[June 2023 - August 2023]

NLP/Chatbot Development Intern

Bangalore - Remote

- Built a **Chatbot** that tracks habits, diet, and lifestyle of users and their families.
- Implemented **APIs** using FastAPI, deployed them using cloud platforms like **AWS**, and integrated CI/CD pipelines for automated deployment and testing, ensuring scalability and reliability of the chatbot solution.

## Projects/Research

### Code-Switching between Languages – DR. UMA | Python, GenAI, LLM's, NLP

[Research]

- Involved in the development of India's first fully open-sourced CodeSwitched Language Model (LLM), focusing on Hindi-English (Hinglish) and Kannada-English (Kanglish) **languages translations**.
- Finetuned a Quantized Llama-2 model with LoRA fine-tuning and DPO optimization, to enhance model performance.

### Multi-Agent LLM Framework – PES University | GenAI, LLMs, Agents

[Research]

- Architected the development of a dynamic collaboration **Framework** for enhancing **Multi-Agent LLM Systems**, optimizing performance through dynamic self-prompting techniques.
- Implemented **SOTA** Agent Security coupled with Context Awareness ensuring system dependability and integrity, and mitigating vulnerabilities in dynamic multi-agent collaboration environments.

### Fast File Explorer for Windows | Go, React, Wails, Python

[Project]

- Developed a Windows File Explorer with **fast searching capabilities** and essential functionalities, using Go for native APIs and React with Wails for the user interface.
- Implemented a caching system for file paths, which is updated in **real-time** with a Python script logging file system changes and enhanced with a fuzzy search algorithm, making it more **efficient than the native file manager**.

## Leadership/Extracurricular

### 6th World Developer and API Summit | Keynote Speaker

[July 2023]

- An an Invited Keynote Speaker, I delivered a talk on the **"Business Prospects of Generative AI"**.
- Being the **only student speaker**, I shared the stage with industry leaders and C Level Employees of Various Companies.

### United Nations Millennium Fellowship Programme | Fellow and Campus Director

[August 2023]

- Selected as one of the **top 250 fellows** out of 5000 applicants worldwide from **260+ Universities**.
- Engaged with counterparts from **38+ countries** to promote tech-driven sustainable development and designed a Non Resource Intensive software that acts as a pair-learner to students with limited access to high-end devices.

## Technical Skills

**Languages:** Python, C, C++, Go, JavaScript, SQL, MERN Stack.

**Technologies/Frameworks:** NLP, GenAI, LLMs, Transformers, Flask, Django, PyTorch, Tensorflow, FAISS, Pinecone, FastAPI, MySQL, MongoDB, Redis, RAG, Nginx, Ngrok, Waitress, Unicorn.

**Developer Tools:** Git, GCP, AWS, Docker, Kubernetes, GitLab CI/CD, GitHub Actions, Jira, Linux, Postman.