

# Sai Anand K

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## EDUCATION

### School of Engineering, CUSAT

*Bachelor of Computer Science*

Kochi, Kerala

*Nov. 2021 – Present*

### Rahmania HSS For Handicapped

*Higher Secondary*

Kozhikode, Kerala

*June. 2019 – March 2021*

## EXPERIENCE

### AI/ML Engineer Intern

June 2024 – Present

*Dataequinox Technology and Research Private Limited*

*Koratty, Kerala*

- Chatbot Development for E-Commerce: Designed and implemented scalable chatbots, overseeing the entire process from front-end user interface to back-end logic.
- Model Training and Optimization: Conducted extensive model training and fine-tuning, achieving significant improvements in AI-driven application performance.
- Applied Prompt Engineering Techniques: Applied advanced prompt engineering with Gen AI, Cohere AI and Llama to enhance the accuracy of product recommendation systems and feedback for customer care chatbot.
- Developed and Fine-Tuned Advanced Language Models: Worked with cutting-edge models like Google Gen AI, Llama 3, and Mistral to build and fine-tune machine learning models for various applications, including product recommendation systems and multilabel classification.

## PROJECTS

### PDF Chatbot Application | Python, Streamlit, Llama API, Google Gemini, PyPDF2

- Developed a PDF chatbot application using Streamlit, integrating Llama API and Google's Gemini models to generate accurate, context-aware responses from PDF content.
- Implemented efficient text extraction using PyPDF2, optimized to handle PDF files of up to 200 MB, with a high accuracy rate of 95% in answering document-related questions.
- Deployed the application on a streamlit platform, allowing real-time interaction and demonstrating scalability with concurrent user handling capabilities.

### AI Pac-Man Agent | PyTorch, Deep Q-Networks, Convolutional Neural Networks, Gymnasium

- Developed a deep Q-network (DQN) agent using convolutional neural networks to play Ms. Pac-Man, achieving a high average score.
- Implemented a four-layer CNN architecture in PyTorch to process game frames and predict optimal actions.
- Trained the model using Gymnasium's environment, with adaptive epsilon-greedy policy for action selection.
- Visualized model performance by generating gameplay videos with the trained agent.

### Brain Tumor Detector | TensorFlow, Keras, Python

- Developed a CNN model for brain tumor detection using MRI images, achieving 88.7% accuracy and a 0.88 F1 score on the test set.
- Expanded the dataset from 253 to 2065 images through data augmentation to address class imbalance.
- Implemented preprocessing steps including cropping, resizing, and normalization.

## CERTIFICATIONS

- Artificial Intelligence A-Z 2024 Build 7 AI LLM ChatGPT (Issued May 2024)
- C++ Programming - Intermediate - G-Tec Computer Education (Issued May 2019)
- Computer Hardware - G-Tec Computer Education (Issued May 2018)
- Computer Operation - G-Tec Computer Education (Issued May 2013)

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++

**Frameworks:** TensorFlow, PyTorch, Scikit-Learn, Streamlit

**Developer Tools:** Git, VS Code, PyCharm, Colab Notebook

**Libraries:** DistilBERT, pandas, NumPy, Matplotlib, Keras, Spacy, Hugging Face, transformers, KeyBERT, Google Gen AI, Cohere AI, Mistral AI, Llama, GPT-4