

# AAKASH V

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## SUMMARY

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A Machine Learning Engineer with 3+ years of experience in developing cutting-edge AI products. Equally skilled in research & development and curious about solving complex problems with innovative solutions. Proficient in Python, Deep Learning, NLP, and MLOps, with a track record of impactful contributions to R&D projects.

## EXPERIENCE

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### UST HEALTHPROOF (UST GLOBAL) | Developer - II Aug 2024 - Present

- Designed and developed an end-to-end HCC coding POC pipeline on Azure, integrating Metamaplite and GPT with robust workflow tracking and exception handling mechanisms.
- Worked on creating a synthetic dataset with GPT, utilizing CMS guidelines and medical coding alphabetic index for building a BERT-based ICD prediction model.

### BUDDI AI | Research Engineer – I May 2022 - July 2024

- Conducted in-depth research on multiple biomedical language models and developed a BERT-based API for filtering candidate medical codes, which remarkably improved the precision of the existing systems by over 25%.
- Developed a cutting-edge relation extraction algorithm with exceptional accuracy, leveraging LSTM models to capture complex relationships among clinical entities with precision and reliability.
- Contributed extensively to the research and development activities conducted on the company's AI-based products, such as NER API, PHI Parser, and Unjoiner.

## PUBLICATIONS

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- Sudarsun Santhiappan, Mukesh Kumar Reghu, Mahendran Saminathan, Aakash Veerappan. "Speeding up LIME using Attention Weights" - CoDS COMAD 2024.

## EDUCATION

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### Thiagarajar College of Engineering 2018 – 2022

Bachelor of Technology | Information Technology CGPA: 9.06

## PERSONAL PROJECTS

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### DIYA: AI-POWERED PERSONAL ASSISTANT

- Designed and developed an AI-powered chatbot named Diya, which can answer relevant questions about myself by leveraging state-of-the-art open-source LLMs and by incorporating best MLOps practices. [GitHub-Repo](#).  
*Tools Used:* Transformers, Pytorch, LLMs, Comet-ML, GitHub Actions, AWS EC2, AWS ECR, Gradio, Docker.

### FINANCE ASSISTANT

- Developed a RAG-based chat application that can answer to finance and investment-related queries leveraging a custom finetuned LLM and Vector DB using the Langchain framework. [GitHub-Repo](#).  
*Tools Used:* Langchain, Vector DB(Qdrant), LLMs, Comet-ML, QLoRA.

### COVID-19 PREDICTOR

- Engineered and deployed a containerized web application onto GCP which uses chest X-ray images to predict the presence of COVID-19 using a CNN-based deep learning model. [GitHub-Repo](#).  
*Tools Used:* CNN, Pytorch, Docker, Kubernetes, GCP, Flask, Travis-CI.

## SKILLS

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- Programming Languages:** Python, Java, Scala.
- Technologies:** Machine Learning, Deep Learning, Natural Language Processing (NLP), Docker, Kubernetes, LLMs, MLOps, DVC, Git.
- Frameworks:** Pytorch, TensorFlow, Scikit-learn, XGBoost, MLflow, CometML, Transformers, NLTK, Numpy, Pandas, Matplotlib, Spacy, FastAPI.