# Adithya Sudhindra

Los Angeles, CA | (213) 301-4085 | asudhind@usc.edu | linkedin.com/in/adithya-sudhindra | github.com/Adithya2441

## Education

**University of Southern California** — **Jan 2025 – Dec 2026**
*Master of Science in Computer Science, GPA: 3.74/4.0* — *Los Angeles, CA*
- Coursework: Analysis of Algorithms, Machine Learning for Data Science, Applied NLP, Foundations of AI, Operating Systems, Distributed Systems, Information Retrieval and Web Search Engines

**JSS Academy of Technical Education** — **Aug 2019 – Jun 2023**
*Bachelor of Engineering in Computer Science, CGPA: 9.24/10.0* — *Bengaluru, India*
- Relevant Coursework: Data Structures, Digital Image Processing, Data Mining and Data Warehousing, AI and ML

## Experience

**Mercedes-Benz Research and Development India** — **Jul 2023 – Dec 2024**
*Consultant (Software Developer)* — *Bengaluru, India*
- Spearheaded development and integration of Generative AI-powered features using **GPT-4o, Ada API and Django**, driving major enhancements in intelligent automation across core applications
- Architected and automated documentation generation within in-house platforms by leveraging GPT-4o LLM and Ada API, increasing documentation PDF engagement by **30%** and streamlining support workflows
- Formulated and executed optimized model delivery pipelines and codebase, resulting in an **18% increase** in processing efficiency through targeted refactoring and performance tuning
- Engineered user-centric features such as **image querying and voice input** to augment application support capabilities and improve user experience
- Designed, implemented, and deployed more than **15** custom client-requested features for **Java**-based platforms, accelerating agile release cycles and ensuring rapid and reliable product delivery

**Saigeware Technologies Pvt Ltd** — **Feb 2023 – Apr 2023**
*AI and Data Science Intern* — *Bengaluru, India*
- Designed and implemented an end-to-end **ML pipeline**; developed a custom ensemble of Random Forest and deep learning models for image and sound data from 800+ clinical patients, elevating multiclass classification accuracy from **55% to 75%**
- Built data extraction pipelines for large-scale healthcare datasets, including advanced feature extraction from image data using **Variational Autoencoders** (VAEs) to learn meaningful latent representations
- Guided dataset engineering, model architecture design, and system optimization for a comprehensive healthcare AI platform
- Performed visualization, data extraction, and trend analysis on a US healthcare dataset of **1.2 billion** patient records; automated data workflows to reduce manual intervention by 30%
- Drove advanced data mining and extraction initiatives on large-scale clinical datasets; created and validated supervised learning models to predict stroke risk, enabling intervention and data-driven patient care

## Projects

**AI-Based Image Generation** | *Stable Diffusion, CLIP*
- Reproduced Stable Diffusion using **80,000 images**, achieving coherence and accuracy competitive with original models (baseline CLIP score: 34.9-36.2; artist imitation **accuracy: 81%**). Fine-tuned pipeline to improve text-to-image quality by 25%

**Machine Learning Projects** | *Scikit-learn, Kaggle*
- Performed sentiment analysis on Amazon product reviews employing advanced machine learning algorithms (Random Forest, XGBoost, Multinomial Naive Bayes, LSTM, SVM), achieving **77–93%** accuracy and ROC-AUC up to 0.92

**Waste Image Classification using Transfer Learning** | *OpenCV, TensorFlow, Scikit-learn*
- Built a multi-class waste image classifier utilizing **transfer learning** (ResNet50, ResNet101, EfficientNetB0, VGG16) with data augmentation, delivering up to **84.9%** validation accuracy and 0.980 AUC

## Technical Skills

**Programming Skills**: Python, Java, C, C++, SQL, HTML, CSS, JavaScript, R, Kotlin
**Frameworks/Tools**: Django, StreamLit, Jira, MySQL, PostgresSQL, MongoDB, Firebase, Docker, CI/CD, Git, Linux, CUDA
**ML Libraries**: NumPy, Pandas, Matplotlib, Scikit-learn, OpenCV, TensorFlow, Seaborn, Statsmodels, Pytorch, Langchain
**Areas**: Large Language Models, Machine Learning, Deep Learning, Computer Vision, Reinforcement Learning, NLP, RAG, ML Ops

## Accomplishments

- Placed 5th in company-wide AWS DeepRacer autonomous AI racing competition, applying reinforcement learning techniques to optimize racing models and compete with global colleagues
- Developed and pitched a novel LLM-based Streamlit chatbot solution for enhancing Mercedes-Benz car manual usability; engineered system to allow users to upload images of car components and receive contextual, manual-driven responses via GPT-4o and Ada API