

# Rhea Pandita

Los Angeles, California, US

Portfolio: rp-1106.github.io

✉ (310)734-9846 | 📩 rheasuneelpandita@gmail.com | 💬 linkedin.com/in/rhea-pandita | 🐾 github.com/RP-1106

## EDUCATION

### University of Southern California

Master of Science in Computer Science

- Courses: Analysis of Algorithms, Database Systems

Aug 2025-May 2027

GPA: 3.5/4

### Shiv Nadar University Chennai

Bachelor of Technology in Artificial Intelligence & Data Science

- Relevant Courses: Big Data Analysis, Artificial Intelligence, Machine Learning Techniques, Natural Language Processing, Deep Learning, Reinforcement Learning, Linear Algebra, Statistical Inference, Data Mining, Foundations of Data Science

Sep 2021-July 2025

CGPA: 9.031/10

## EXPERIENCE

### USC Center for the Neuroscience of Embodied Cognition A-Z Lab

Graduate Research Assistant

Aug 2025-Present

Los Angeles, CA, USA

- Addressing the challenge of evaluating LLMs on causal and predictive reasoning over human-action videos.
- Annotated a point-light human-action video dataset and created an augmented supervision dataset with structured summaries, behavior labels, and causal/future-action hypotheses.
- Plan a pipeline to benchmark LLMs on these causal and predictive reasoning tasks.

### KPIT Technologies

Trainee

Jun 2024-Aug 2024

Bangalore, Karnataka, India

- Parsed IGES and STEP CAD files using Python, extracting structured geometric parameters for downstream analysis and improving data readiness for CAD automation.
- Developed Python algorithms to classify & map 2D shapes to 3D counterparts, enabling scalable parameter editing
- Built a dictionary of valid 2D–3D shape mappings, supporting automated geometry updates across multiple designs.

### KPIT Technologies

Trainee

May 2023-Aug 2023

Bangalore, Karnataka, India

- Implemented Stable Diffusion text-to-image pipeline for car design, cutting sketch-to-3D from months to weeks.
- Built image-to-3D mesh reconstruction workflow, outputting .obj models for automotive prototyping.
- Delivered a proof-of-concept generative AI workflow demonstrating potential to accelerate automotive design cycles from months to weeks.

## PROJECTS

### AI-Assisted Personal Finance Management System

May 2024 – Apr 2025

- Developed two RAG-based financial chatbots leveraging Mistral Saba 24B via GROQ API on 4,530 transactions.
- Iteratively refined prompts by curating a 330 question–SQL document, improving LLM transactional reasoning accuracy
- Applied RAG-based grounding to the document chatbot, reducing response time by 81% and memory usage by 33% against OllamaLLM Mistral.
- SQL chatbot achieved faithfulness 1.0, relevance 0.872 and 89% faster responses against OllamaLLM Mistral using RAGAS module.

### Wordle with Hints

Jan 2024-Apr 2024

- Developed a Wordle game using BERT, KeyBERT, and DistilBERT embeddings to generate contextualised hints
- Applied embedding similarity and clustering to rank candidate words based on semantic relevance
- Evaluated contextual embeddings to understand semantic relationships and keyword extraction behavior

## PUBLICATIONS

T. R. Althi, V. Kothamachu, R. Pandita, "Accelerating Automotive Design: Harnessing AI Models for Efficient 3D Design and Development of Automobile Systems and Subsystems"

2023 IEEE International Transportation Electrification Conference (ITEC-India), Chennai, India, 2023, pp. 1-5, doi: 10.1109/ITEC-India59098.2023.10471378

## SKILLS

**Languages:** Python, C, Java, JavaScript, HTML, CSS, SQL, JupyterNotebook

**AI Tech:** Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Transformers

**Frameworks :** React, Node.js, Hadoop, PySpark, Flask, Tableau, HuggingFace Transformers

**Libraries :** Pandas, Numpy, Matplotlib, TensorFlow, PyTorch, Keras, ScikitLearn, XGBoost, SpaCy, NLTK