

# VISHNU RESHAMWALA

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## EDUCATION

### California State University Channel Islands

Master of Science in Computer Science (GPA: 3.9/4.0)

Camarillo, CA

Aug. 2023 – Dec. 2025

### Bhagwan Mahavir College of Engineering and Technology

Bachelor of Engineering in Computer Engineering (CGPA: 7.85/10.00)

Surat, India

Jul. 2018 – May 2022

## EXPERIENCE

### Master's Thesis - Intelligent Human-Robot Interaction System

Jan. 2025 – Present

California State University Channel Islands (Advisor: Dr. Bahareh Abbasi)

Camarillo, CA

- Pioneering multimodal human-robot interaction research by developing an intelligent manipulation system that seamlessly translates natural language commands into precise robotic actions using the Sawyer collaborative robot platform
- Engineered a novel computer vision pipeline integrating OpenAI's GPT-4o vision model for real-time object detection, shape classification, and spatial reasoning
- Leading independent research with findings targeted for peer-reviewed conferences in collaborative robotics

## PROJECTS

### Bink: AI Conversational Shopping Assistant | *React, Node.js, Gemini API, SerpApi, Supabase* [Demo \(YouTube\)](#) | [Website](#)

- Developed "Bink," an AI shopping assistant enabling product search via text, images, and virtual try-on for an interactive shopping experience
- Integrated Google Gemini for multimodal (text and image) query understanding, AI-driven search keyword generation, and intelligent product recommendations
- Utilized SerpApi for real-time product searching from Google Shopping, with specialized modes for general and "thrifty" (second-hand) items
- Implemented secure user authentication and data storage using Supabase (PostgreSQL), with API rate limiting, and deployed on Vercel and Render

### TinderJob: Swipe-Based Job Matching | *React.js, NestJS, MongoDB, JWT Authentication, RESTful APIs* [Demo \(YouTube\)](#)

- Developed an innovative job recruitment platform that revolutionizes hiring with a swipe-based interface for seamless recruiter-job seeker matching
- Features secure authentication, instant messaging, and automated interview scheduling

### Retrieval-Augmented Generation (RAG) AI Agent | *LangChain, FAISS, LLaMa, HuggingFace Transformers*

- Architected an AI agent using Retrieval-Augmented Generation (RAG) to provide context-aware responses
- Implemented document loading, vector storage, and retrieval using LangChain and FAISS. Integrated LLaMa language model for generating context-aware responses
- Created an interactive command-line interface for real-time user queries, enhancing information retrieval from a local document corpus

## OTHER EXPERIENCE

### IT Help Desk Student Assistant

Aug. 2024 – Present

California State University Channel Islands

Camarillo, CA

- Provide comprehensive technical support to university community, resolving network, application, and A/V issues
- Manage incidents through TeamDynamix and collaborate with team to enhance operational efficiency

## TECHNICAL SKILLS

**Programming Languages:** C/C++, Java, JavaScript, TypeScript, Python, ROS

**Technologies:** Git, Docker, CI/CD, AWS, GCP, Linux/Unix, HTML, CSS, SQL, Supabase, Vercel, Render

**Frameworks & Libraries:** React, Node.js, Next.js, Express, NestJS, PostgreSQL, MongoDB, RESTful APIs, SerpApi

**AI/ML:** TensorFlow, Keras, PyTorch, NumPy, Pandas, Scikit-Learn, CNN, LangChain, FAISS, LLaMa, HuggingFace, Amazon SageMaker, OpenAI API, Gemini API, Ollama

## CERTIFICATIONS & ACHIEVEMENTS

**Machine Learning by Stanford University (Coursera):** Grade 100%

Mar. 2024

**AWS Academy Graduate:** Cloud Architecting

Dec. 2024

**AWS Academy Graduate:** MLU Machine Learning through Application

Dec. 2023

**Winner:** CSUCI Mission & AWS Hackathon Event

Sept. 2023

**Active Member:** Artificial Intelligence Club

Sept. 2023 – Present