VISHNU RESHAMWALA

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EDUCATION

California State University Channel Islands — Camarillo, CA
Master of Science in Computer Science (GPA: 3.9/4.0) — *Aug. 2023 – Dec. 2025*

Bhagwan Mahavir College of Engineering and Technology — Surat, India
Bachelor of Engineering in Computer Engineering (CGPA: 7.85/10.00) — *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 "thrift" (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