KEVAL RAJESH SHAH

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EDUCATION

Arizona State University, School of Computing and Augmented Intelligence, Tempe, AZ — **August 2024 – December 2025**
Master of Science in Robotics and Autonomous Systems — **GPA: 4.00/4.00**
Honors and Awards:
- Llama Impact Hack Winner

Relevant Courses:
- Perception in Robotics
- Intro to AI

Arizona State University, School of Computing and Augmented Intelligence, Tempe, AZ — **August 2021 – May 2024**
Bachelor of Science in Computer Science — **GPA: 4.00/4.00**
Honors and Awards:
- Summa Cum Laude
- Moeur Award
- Dean's List Fall'21 to Spring'24
- 6 x Hackathon Winner

Relevant Courses:
- Foundation of Machine Learning
- Data Structures and Algorithms
- Database Management
- Human-Computer Interaction

WORK EXPERIENCE

Interacactive Robotics Labs | **AI Researcher** — November 2024 - Present
- Developed a scalable reinforcement learning framework that leverages large language models (LLMs) to autonomously generate and refine policies across diverse robotics control challenges.
- Engineered robust memory and policy table architectures to discretize continuous state spaces, enabling dynamic decision-making in various simulation environments (e.g., CartPole, and other complex problems).

Meteor Studios | **Lead XR Developer** — August 2024 - Present
- Led a team of six in creating a **VR experience** for 1,000 biomedical students, collaborating with CISA Water Treatment and Dreamscape.
- Utilized **Unity** with **C# scripting** and the **OpenXR toolkit** to build immersive VR applications.
- Employed **SCRUM methodologies** to enhance team collaboration and streamline the development process.

BeHuman(e) | **Full Stack Developer** — Jan 2024 - Present
- Developed the **frontend** of an emotionally intelligent **AI application** using **ReactJS** and **Tailwind CSS**, implementing over 40 critical features to enhance user experience and engagement.
- Engineered and optimized **backend services** with **FastAPI** and **PostgreSQL**, improving **data handling** and **API performance**.
- Integrated **mailing** and **messaging systems** using **Mailersend** and **Twilio**, enhancing communication functionalities and enabling real-time user interactions.
- Designed and implemented a **Retrieval-Augmented Generation (RAG)** system, along with a **message classification** and **recommendation engine**, personalizing user interactions based on prior user data and improving **AI response accuracy**.

PROJECTS

EquiBraille
- Engineered an **AI-powered refreshable Braille display** using **Convolutional Neural Networks (CNNs)** to transform handwritten classroom text into real-time **3D Braille** for blind students.
- Developed a comprehensive **software system** that utilizes **AI** to create accessible educational content—including notes, exam prep materials, and quizzes—for visually impaired users; built the **frontend** with **React.js** and **Tailwind CSS**, **AI integration** with **LangChain**, and the **backend** with **FastAPI**.
- Enhanced scalability and reliability by leveraging **AWS EC2**, **SQS**, and **S3** for service hosting; won the **Verizon Digital Equity Jam** and **Verizon Forward for Good Challenges**, securing $51,000 in seed funding, and received commendations from **ASU**, **Verizon**, **HBCU**, **UNCF**, **AWS**, and **CGI**.

RoboLLVM
- Developed an advanced **Multimodal Large Language Vision Model** for **robotics**, enabling drones and robots to interpret and execute **natural language commands** by processing real-time video streams.
- Engineered key components—including **Segmentation** (using the SA-1B dataset), **Classification**, **Reasoning**, and **Action modules**—enhancing robots' **contextual awareness** and **autonomous capabilities**; integrated technologies like **YOLOv8** for real-time object detection.

Geofenced Attendance System
- Developed an open-source **geofence-based attendance system** serving as an alternative to iClicker, enabling **location-based attendance tracking** for educational settings.
- Implemented a robust **full-stack application** using **Next.js**, **TypeScript**, **Tailwind CSS**, and **Prisma**, featuring a well-structured project architecture with dynamic geofencing components, reusable UI elements, and efficient **API endpoints**.

TECHNICAL SKILLS

Programming Languages : Python, C/C++, Java, JavaScript, TypeScript, Swift, MATLAB
Machine Learning & AI : TensorFlow, PyTorch, scikit-learn, Keras, Pandas, NumPy, OpenCV, LangChain
Robotics : ROS, NVIDIA Isaac SDK
Frontend Development : ReactJS, Next.js, Tailwind CSS, HTML, CSS
Backend Development : FastAPI, Node.js, Flask, PostgreSQL, MongoDB, Prisma, ChromaDB
Web Scraping & Automation : Selenium, BeautifulSoup
Cloud Platforms & Tools : AWS, Docker, GitHub, Bitbucket