HIMANSHU KIRAN GARUD

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Education

University of North Carolina at Charlotte **Aug 2023 – Present**
Masters of Science in Computer Science *GPA: 3.9/4.0*
Courses: Algorithms, Data Structures, Software Engineering, Object Oriented Programming, Mobile Application Development, Artificial Intelligence

Experience

EPRI – *Software Engineer Intern, United States* **June 2024 – Present**

- Built a cross-platform EPRI subscriber portal using **Vue.js and TypeScript**, ensuring 95% device compatibility through responsive UI design and rigorous browser testing.
- Developed interactive data visualizations with **D3.js and ObservablePlot.js**, reducing rendering time by 20% while accurately plotting high-dimensional scientific datasets.

Persistent Systems – *Software Engineer, India* **May 2021 – July 2023**

- Built and automated **YAML feeds** for Renaissance Learning (US), reducing AWS billing time by 65% and improving performance by 40%.
- Migrated data layer from **GraphQL to SQL Server**, reducing API response time by 30% and boosting data reliability.
- Automated ETL pipelines using **Python, DBT, and Google BigQuery**, improving data throughput by 25%.
- Led a subsidiary data automation project for Oscar Health (US), managing 100+ data feeds and streamlining **AWS** billing analysis.

Eastro Control Systems – *Full Stack Developer Intern, India* **Dec 2019 – Feb 2020**

- Built a fault-tolerant **Python Flask web application** with an optimized **SQLite database** to track and approve employee work hours, improving HR efficiency and query performance by **30%** for 50+ employees.

University of North Carolina at Charlotte – *Research Assistant, United States* **Jan 2024 – May 2024**

- Developed a **3D CNN model** for dynamic human mesh reconstruction using real-time point cloud data from VTrig-74 mmWave sensors, achieving an average localization error of 2.47 cm.

Technical Skills

Programming:	C, C++, Java, Python, JavaScript.
Frameworks & Libraries:	Node, VueJS, Streamlit, REST API, HTML/CSS, Bootstrap, React.
Cloud:	AWS, SQS, SNS, Lambda, CloudWatch, Docker, DBT.
DB & OS:	SQL, Oracle DB, MongoDB, PostgreSQL, MySQL, PostgreSQL, BigQuery, Linux
Tools & Platforms:	Git, Github, TypeScript, Postman, JIRA, OpenAPI

Projects

Posturelytics.AI: AI-Powered Posture & Focus Tracker

- Built a full-stack web app using **Vue.js, FastAPI, and MongoDB** to monitor posture and attention in real-time via webcam using **MediaPipe Pose & FaceMesh** with over **95% classification accuracy**.
- Generated personalized GPT-4 feedback and visualized behavioral insights through dynamic charts and a custom **anatomical SVG heatmap** with live strain indicators.

Sign Flow: Full-Stack ASL Interpreter with Sentence Buffering and Voice Output

- Engineered a real-time ASL-to-text and speech interpreter using **React, FastAPI, PyTorch, and MediaPipe Hands**, enabling accurate gesture recognition and dynamic sentence formation from live webcam input.
- Trained a custom CNN model achieving **95%+ accuracy** on ASL alphabet dataset and built a full-stack pipeline for real-time gesture capture, **90%+ top-1 prediction consistency**, and GPT-powered sentence translation with voice synthesis.

Achievements

- **Secured 1st place** among **100+ participants at the Hack with CAIR Hackathon** organized by UNC Charlotte, for building *Posturelytics.AI*, an AI-Powered Posture & Focus Tracker.
- **Ranked in the Top 20 out of 200+ projects at HooHacks 2025**, a Major League Hacking event hosted at the University of Virginia, attended by 800+ participants from across the U.S.
- Awarded the **High Five Award** at Persistent Systems for demonstrating proactiveness in understanding project functionality **FY21 Q2**.
- **Published Research Paper** *"Machine Learning Based Depression Classification Model"* in **IJCRT journal, June 2022 (Impact Factor: 7.97)**.
- **Published Review Paper** *"Fake News Detection And Classification Using Distinct Machine Learning Algorithms"* in **IJCRT journal, January 2021 (Impact Factor: 7.97)**.