

# Charan Vardham

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## EDUCATION

<b>Case Western University</b> <i>Bachelor of Science in Computer Science, Minor in Math</i>	Cleveland, OH Aug. 2024 – May 2028
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<b>Relevant Courses</b> <i>Intro to Data Structures, Discrete Mathematics, Programming in Java, Algorithms, Computer Security, Linear Algebra</i>	
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## EXPERIENCE

<b>Undergraduate Student Researcher</b> <i>Case Western Reserve University</i>	Aug 2025 – Present
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- Applied deep learning methods to generate CT scan images with varying reconstruction kernels, enabling analysis without direct access to raw imaging data

<b>Freshman Outreach Representative</b> <i>Case Western Reserve University</i>	Aug 2024 - Present
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- Designed and implemented a Node.js nutrition app, providing meal recommendations based on dietary intake and fitness goals.
- Coordinated outreach efforts for the largest CS club on campus, engaging incoming students through weekly meetings, workshops and social events.

<b>AI/ML Intern</b> <i>IQVIA</i>	May 2025 - Aug 2025
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- Built a RAG-based medical chatbot with a FastAPI backend and Next.js frontend, enabling users to query uploaded medical PDFs with chat history stored in MongoDB
- Worked on the backend team for a voice-enabled chatbot using NVIDIA Riva, implementing API methods to integrate real-time STT/TTS with an LLM for natural voice interactions

<b>Researcher</b> <i>CWRU Quants</i>	Nov 2024 - May 2025
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- Extracted and engineered features from earnings call transcripts by applying NLP techniques such as TF-IDF vectorization and readability metrics (e.g., Flesch Reading Ease).

## PROJECTS

<b>CycleGAN Framework</b>   <i>Pytorch, Matplotlib, Pandas</i>	August 2025 - September 2025
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- Developed a CycleGAN framework capable of translating images between horses and zebras without paired training data.
- Implemented custom data loading, generator-discriminator architecture, and training loop to achieve stable adversarial training

<b>Streamlit-GenAI App</b>   <i>Streamlit, Python, Tavily API, Open-source LLMs</i>	May 2025 - June 2025
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- Built a Streamlit GenAI app to scrape websites and answer user queries using LLMs with turn-based chat history.
- Integrated Tavily API, open-source LLMs, and a dashboard for search analytics — no LangChain used.

## TECHNICAL SKILLS

**Languages:** Java, Python, SQL (Postgres), JavaScript, HTML/CSS, R

**Frameworks:** React, Node.js, Next.js, Material-UI, FastAPI

**Developer Tools:** Git, Docker, VS Code, Visual Studio, PyCharm, IntelliJ

**Libraries:** Pandas, NumPy, Matplotlib, Scikit-Learn, PyTorch, TensorFlow