




# Raghav Nanjappan

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## RESEARCH INTERESTS

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VR interaction design, cybersickness, multisensory perception, human-AI interaction, and user-centered evaluation, with a focus on user perception and adaptation in immersive systems.

## EDUCATION

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<b>Master of Science</b> Computer and Information Sciences <i>University of Florida</i>	Aug. 2024 – Present GPA: 3.27/4.00 <i>Gainesville, Florida</i>
<b>Bachelor of Technology</b> Computer Science and Engineering (Artificial Intelligence and Machine Learning) <i>Dayananda Sagar University</i>	Aug. 2020 – Jun. 2024 GPA: 8.78/10.0 <i>Bengaluru, India</i>

## RESEARCH EXPERIENCE

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<b>Volunteer Research Assistant</b> Ruiz Lab <i>University of Florida</i>	Jun. 2025 – Present Herbert Wertheim School of Engineering <i>Gainesville, Florida</i>
<ul style="list-style-type: none"><li>Developed a Unity environment to simulate the effects of motion sickness in VR users</li><li>Implementing a client-server architecture to enable remote control of the VR experiment from a web interface</li><li>Conducting an IRB-approved study to measure simulator sickness under controlled VR perturbations</li><li>Analyzing the data using quantitative methods to identify patterns in user discomfort</li></ul>	
<b>Research Assistant</b> Computer Science and Engineering (Artificial Intelligence and Machine Learning) <i>Dayananda Sagar University</i>	Sep. 2023 – May 2024 School of Engineering <i>Bengaluru, India</i>
<ul style="list-style-type: none"><li>Classified motor imagery EEG and MEG signals with different deep learning models</li><li>Collected the dataset from existing research papers and online repositories</li><li>Implemented a customized preprocessing pipeline to extract relevant features</li><li>Designed the architecture of the model with Tensorflow and Keras</li></ul>	
<b>Research Assistant</b> Computer Science and Engineering (Artificial Intelligence and Machine Learning) <i>Dayananda Sagar University</i>	Jan. 2023 – Jun. 2023 School of Engineering <i>Bengaluru, India</i>
<ul style="list-style-type: none"><li>Compared the performance of 3 different algorithms to predict the thought of a person with speech impairment</li><li>Assisted in the collection of EEG signals from the brain of the participants using the Emotiv EPOC+ headset</li><li>Aided in the preprocessing of the dataset by removing the noise and extracting the features</li><li>Trained Support Vector Machines, k-Nearest Neighbors and Long Short-Term Memory models with the dataset</li></ul>	

## PUBLICATIONS

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- [1] R. Nanjappan, V. N., and J. Vrindavanam. “**NeuroTransformer: Transformer Model for Motor Imagery Classification.**” In *Data Science and Applications (ICDSA 2024)*, S. J. Nanda, R. P. Yadav, A. H. Gandomi, and M. Saraswat (eds.). *Lecture Notes in Networks and Systems*, vol. 1239. Springer, Singapore, 2025.  
DOI: 10.1007/978-981-96-1188-1\_24
- [2] J. Vrindavanam, R. M. Balakrishnan, R. Nanjappan, and G. Kamath. “**Empowering Speech-Impaired Individuals: EEG-Driven Cognitive Expression Translated into Speech.**” *International Journal of Computer Applications*, vol. 185, no. 28, pp. 43–46, Aug. 2023.  
DOI: 10.5120/ijca2023923034

## PRESENTATIONS

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- [1] R. Nanjappan. “**Thought to Speech for Speech Impaired.**” Presented at the *17th INDIACom: 10th International Conference on Computing for Sustainable Global Development*, Delhi, India, Mar. 2023.
- [2] R. Nanjappan. “**NeuroTransformer: Transformer Model for Motor Imagery Classification.**” Presented at the *5th International Conference on Data Science and Applications (ICDSA 2024)*, Jaipur, India, Jul. 2024.

## PROFESSIONAL EXPERIENCE

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- Grader - CAP5100 Human-Computer Interaction** Sep. 2025 – Dec. 2025  
*Dept. of Computer and Information Science and Engineering, University of Florida Gainesville, Florida*
- Evaluated student sketches and low-fidelity design concepts for an assignment
  - Graded project proposals, reports, and implementation deliverables for semester-long project
  - Assessed IRB training assignments and student-developed evaluation plans
  - Graded sections of the midterm exam and provided necessary feedback to a class of 151 students
- AI Research Intern** Oct. 2023 – May 2024  
*Arkham Archives Private Limited Remote, India*
- Acquired different data samples from various sources and performed data cleaning
  - Conducted thorough research on emerging large language models
  - Developed an architecture for a text-based quest generation system that aims to help students learn better
  - Fine-tuned the GPT-2 model with the acquired data samples

## PROJECTS

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- GNV RTS Application | Figma** Sep. 2025 – Dec. 2025
- Designed a Figma prototype to improve the application used by the Gainesville bus network
  - Utilized design heuristics and interaction principles to critique existing application
  - Conducting formal user testing with 10 participants to evaluate the prototype
  - Reiterating the prototype based on the feedback from the user testing
- Get Cooking! | Unity, C#** Oct. 2025 – Dec. 2025
- Designed a Unity VR game that allows users to cook recipes in a virtual kitchen
  - Developed an interaction mechanism that allows users to grab different objects
  - Created a UI that allows users to select different recipes and ingredients
  - Demonstrated the application to the students of the University of Florida
- Bon Aппétit | React, Gemini API, Mermaid.js** Mar. 2025 – Apr. 2025
- Developed a React-based web application that converts recipe URLs into visual flowcharts
  - Integrated Google's Gemini API to extract and process recipe information from various cooking websites
  - Implemented Mermaid.js to generate interactive flowcharts representing recipe steps and ingredients
  - Created a responsive UI that allows users to save and share their recipe flowcharts

## CERTIFICATIONS

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- Python for Computer Vision with OpenCV and Deep Learning | Udemy** Oct. 2023
- NLP - Natural Language Processing with Python | Udemy** Sep. 2023

## POSITIONS OF LEADERSHIP

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- Web Master** Dec. 2023 – May 2024  
*Dayananda Sagar University Association for Computing Machinery Student Chapter Bengaluru, India*
- Designed and maintained the official website for the university's ACM Student Chapter
  - Collected and published articles on the website
  - Assisted in conducting a workshop on research methodology and LaTeX
  - Aided in the organization of a national level conference
- President and Founding Member** Apr. 2022 – Apr. 2023  
*AIWorks @ DSU Bengaluru, India*
- Founded the university's Artificial Intelligence and Machine Learning club
  - Mentored students on various topics related to AI and ML
  - Organized seminars on the latest developments in the field of AI, given by industry experts
  - Conducted a university level hackathon on machine learning

## MEMBERSHIPS

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- ACM Special Interest Group in Computer-Human Interaction (SIGCHI)** Nov. 2025 – Present
- Association for Computing Machinery** Dec. 2022 – Present

## TECHNICAL SKILLS

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**Languages:** Python, C#, JavaScript, SQL, C, C++, Java

**Tools:** Git, Unity, Figma

**ML:** TensorFlow, PyTorch, OpenCV

**Web:** React