



Hariharan Vinod

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Research Objectives

- To gain practical experience through internships that complement my academic studies and strengthen my research and data analysis skills.
- To apply scientific knowledge to address real-world challenges focusing on environmental conservation and ensuring a sustainable future for all.
- To contribute meaningfully to research programs by leveraging my commitment to learning, ability to learn quickly, and passion for scientific discovery.
- To further develop my expertise in microbiology, biotechnology, and related fields, while fostering collaboration and knowledge-sharing through group discussions and STEM activities.
- To utilise the skills, I have developed to create impactful solutions that bridge the gap between science and society.

Education/Academic Background

BSc (Honors) Biotechnology, Biochemistry and Microbiology

2023 – 2027

Malla Reddy University

Research Experiences

Worked on Binomial Nomenclature Database

11/2024 – 02/2024

The Binomial Nomenclature is a Database of Common names and Scientific names of more than 700 organisms. The database is open source and hosted online with options to search and filter the data. The database was created by using Web Scraping methods and now an app is also available.

Worked on Vaayu+ at Malla Reddy University

02/2024 – 11/2024

Vaayu+ is an innovative indoor air purification system powered by living algae. By harnessing the natural photosynthetic properties of algae, Vaayu+ captures harmful carbon dioxide (CO₂) from indoor environments, producing fresh oxygen in return and creating local zones of purified air.

Non-research Experiences/Volunteering Activities

- Fundamental biotechnology techniques (DNA extraction, gel electrophoresis, and PCR) - 2024 - Trainee at NTHRYS Biotechnology Labs.
- Volunteer for A Two-Day National Conference on National Education Policy (NEP) 2020
- Co-Authored a chapter in a Book titled Recent Development in Biological Science (978-93-48990-80-8)

Technical Skills

- Programming Languages: Python, R, JavaScript
 - ASL_Bee: A pygame app which teaches fingerspelling in ASL.
- Software Proficiency: VS Code, Blender 3D, Microsoft Office Suite (Word, Excel, PowerPoint, Access)
- Database Management: Proficient in interacting with biological databases, Experience with DBMS such as SQL
- Operating Systems: Windows, Linux, Raspberry Pi
- Equipment and Laboratory Skills: Familiar with pipetting, spectrophotometry, and centrifugation
- Bioinformatics and Data Analysis:
 - Experienced in analysing biological data and datasets
 - Competent in statistical analysis and data visualization

Awards/Honors/Grants/Fellowships

Class Representative: I was elected as Class Representative in my first year of college at Malla Reddy University, for my leadership and organizational skills.

Synchrony Scholarship Program: I was awarded a scholarship of 4000 USD for academic excellence from Synchrony Financial.

First Place in a Paper Presentation: I won First place for presenting a review article on the *“Use of Bionanotechnology to Treat Alzheimer’s Disease”*.

First place in Elocution Competition: I won First place for giving an elocution on the topic – “Breaking Boundaries: Indian Young Minds Redefining Global Science and Innovation.”

Second Place in Poster Presentation: I worked with a team and presented a poster creating awareness about Neurodiversity and won Second place for it.

Languages Known

- English
- Hindi
- Tamil