

# Vaibhav Mehra

AI Developer and Human Brain Enthusiast

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🌐 [LinkedIn Profile](#)

🐙 [Github Profile](#)

## Education and Achievements

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### Hasselt University

PhD in Computer Science

2025 - Present

Hasselt, Belgium

### Erasmus Mundus Fully Funded Masters

Masters in Cyberspace, Behavior and E-therapy (81.5%)

2023 - 2025

Lisbon-Paris-Barcelona

### University of Delhi

Bachelors of Technology - IT and Mathematical Innovation (CGPA: 9.45 / 10.00)

2019 - 2023

Delhi, India

## Experience

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### AFAR Lab – University of Cambridge

Research Intern

Jan 2024 – Sept 2025

Cambridge, UK

- Development of multimodal, emotionally aware, transformer-based chatbot for improving mental health
- Aiding chatbot with emotions, heart rate variability and other bio-signals extracted from user video

### GenVR Lab

AI Developer

Feb – June 2023

Delhi, India

- Developed the text-to-image generation pipeline, producing high-quality images
- Developed the automated and optimized structure for face training in Text to image production

### Basque Center on Cognition, Brain & Language

Guest Researcher

Jan – May 2023

Basque Country, Spain

- Development of AI based Surreal Image dataset generation
- Using a separate AI pipeline to differentiate surreal images from normal.

### CPS Lab – University of Delhi

Research Intern

July 2022 – Feb 2023

Delhi, India

- Developed emotional understanding in the Transformer model for generic decision-making
- Analysis of last statement of death row criminals through AI model to analyze their emotional state

### Department of NMR – AIIMS

Research Intern

April – May 2022

Delhi, India

- Standardized the Protocol for Volumetric Segmentation over MDD Patients over sMRI and fMRI scans.

## Publications

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**How Large Language Models Classify and Semantically Explain Facial Expressions from Valence-Arousal Values**

Mehra V., Laban G., Gunes H. | [doi.org/10.1145/3719160.3737618](https://doi.org/10.1145/3719160.3737618)

**Consistency in Verbal Expression of Death row criminals: Concluding lives with emotions**

Mehra V., Shukla U., Aggarwal N., Singh S. | [doi.org/10.3389/fcomp.2024.1463692](https://doi.org/10.3389/fcomp.2024.1463692)

**Can an LLM-equipped Multimodal Chatbot adapted to psychological techniques improve Mental Wellbeing?**

Mehra V., Vega D. | Presented at ICDVRAT 2024 | [Link](#)

**Simulation of nanocarrier based targeted antidepressant Delivery mechanism**

Mehra V., Sirkar N., Biswal B., Kaushik M. | [doi.org/10.1080/08927022.2023.2241764](https://doi.org/10.1080/08927022.2023.2241764)

## Skills

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**Programming Languages:** C/C++, Python, JS, Perl, MATLAB, PHP, SQL, Shell, HTML, R

**AI Models and Architectures:** Transformers, LLMs, RNNs, LSTMs, GANs, CNNs, ANNs, Linear and Polynomial Regression, Decision Trees, Boosting and Bagging, SVMs, KNNs and others

**Libraries/Frameworks:** Tensorflow, Pytorch, Scikitlearn, Keras, Django, Flask, Node.js, Laravel

**Tools / Platforms:** PowerBI, Tableau, FreeSurfer, Docker, Git, Firebase, Apache/Nginx, Nvivo, SPM12/SPM8, Pymol, BrainSuite, AutoDock, AlphaFold