

Vaidehi Agarwal

✉ vaidehi.agr@gmail.com

☎ 9717681003

in vaidehi-agarwal

🔗 vaidehi0910

Education

Indian Institute of Technology Indore <i>Master of Science-Research — Computer Science and Engineering</i>	<i>Jul 2023 – May 2025</i> <i>CGPA: 9.8/10.0</i>
Indian Institute of Technology Madras <i>Bachelor of Science — Programming and Data Science</i>	<i>Jan 2020 – Dec 2023</i> <i>CGPA: 8.7/10.0</i>
JC Bose University of Science and Technology, YMCA <i>Bachelor of Technology — Computer Engineering</i>	<i>Aug 2019 – Jun 2023</i> <i>CGPA: 8.67/10.0</i>

Publication

SHINE: Synergizing Transformers with Contrastive Learning for Thriving rPPG-based SpO₂ Estimation	Submitted
<i>Vaidehi Agarwal</i> , Trishna Saikia, Anup Kumar Gupta, Dr. Puneet Gupta Elsevier Expert Systems With Applications	

Projects

SpO₂ Estimation from Face Videos <i>Deep Learning — Signal Processing</i>	<i>Jun 2024 - Present</i>
<ul style="list-style-type: none">Created a new dataset for SpO₂ estimation containing facial videos and their corresponding SpO₂ and pulse rate.Explored different rPPG principles, Eulerian and Lagrangian techniques, to extract temporal signals.Designed a deep learning and computer vision framework for remote SpO₂ estimation.Employed advanced deep learning techniques like transformer.	
Heart Rate Estimation using Camera <i>Deep Learning — Signal Processing — PyQt-5</i>	<i>Jan 2024 - Jun 2024</i>
<ul style="list-style-type: none">Developed an application that estimates heart rate from the face using OpenCV.Detects face mask with 97% accuracy with CNN model.Used different algorithms to detect heart rate with MAE of 6 on a public dataset containing 150+ videos.	

[Github](#) 

Experience

Teaching Assistant <i>Indian Institute of Technology Indore</i>	<i>Indore, Madhya Pradesh</i> <i>Aug 2023 – Present</i>
<ul style="list-style-type: none">Taught 50+ student implementation of machine learning modelsHelped 120+ students to understand concepts of computer vision.	
Business Analyst Intern <i>Egrowth Technologies (1digitalstak.ai)</i>	<i>Gurugram, Haryana</i> <i>Jan 2023 – Jun 2023</i>
<ul style="list-style-type: none">Scraped data from internet markets, analyzed it to produce suggestions for content and net promoter scoring (NPS).Developed a BERT-based NLP model to classify and analyze 200,000 reviews, enhancing semantic search and information extraction capabilities for decision-making.Engineered dashboards using PowerBI to effectively communicate insights from datasets, increasing data-driven decision efficiency by 25%.	

Extracurricular Activities and Achievements

Branch Representative — Counselling Cell of IIT Indore	<i>2023-2025</i>
4 star coder in Python — HackerRank	<i>2024</i>
AIR 938 — prestigious GATE examination	<i>2023</i>
Certificate of Merit — IIT Madras	<i>2022</i>
Bagged top 5% in C programming — NPTEL online certification	<i>2022</i>