

MADHAV AGARWAL

OBJECTIVE	To work with a dynamic organization for developing socially relevant products using Computer Vision and Artificial Intelligence.
EDUCATION	<p>MS by Research, Computer Science and Engineering, 2021 - Present International Institute of Information Technology, Hyderabad CGPA: 9.17</p> <p>Bachelor of Technology (Hons.), Information Technology, 2014-2018 Dr. A.P.J. Abdul Kalam Technical University, Lucknow Ajay Kumar Garg Engineering College, Ghaziabad Percentage: 76.00%</p> <p>All India Senior School Certificate Examination, 2013 R.R.K. Senior Secondary School, Chandausi (CBSE) Percentage: 88.00%</p>
WORK HISTORY	<p>Research Fellow at International Institute of Information Technology, Hyderabad Computer Vision Deep Learning Face Reenactment Document Understanding Nov 2019 – Present</p> <p>Machine Learning Consultant at GuiseAI Computer Vision Deep Learning Model Optimization Solution on Edge Devices Jan 2022 – June 2022</p> <p>Senior Data Scientist at CAW Studios Computer Vision Deep Learning Document Understanding Dec 2019 – Sept 2020</p> <p>Data Scientist at Innefu Labs Pvt. Ltd. Computer Vision Deep Learning Smart Security and Surveillance Solution Jul 2018 - Sept 2019</p> <p>Data Scientist at Tidyquant Pvt. Ltd. Predictive analytics using machine learning Jan 2018 - April 2018</p> <p>Machine Learning Intern at HR Real Value Prediction of house prices and valuation of real estate using Machine Learning models. June 2017- July 2017</p> <p>Data Analyst Intern at GoHelper Mapping vendors with potential customers based on geographic and revenue models. May 2016 – July 2016</p>
SKILLS	<p>Programming Languages: Python, C and C++</p> <p>Deep Learning Technologies: CNN, RNN, LSTM, GAN, Transformers, NeRF</p> <p>Deep Learning Framework: PyTorch, Keras, TensorFlow</p> <p>ML Libraries : OpenCV, Numpy, Pandas, Scipy, Matplotlib, Numba and others</p> <p>Operating System : Linux, Windows</p>

RESEARCH	<p>Audio-Visual Face Reenactment</p> <p>Winter Conference on Applications of Computer Vision (WACV), 2023.</p> <p><i>Authors: Madhav Agarwal, Rudrabha Mukhopadhyay, Vinay Namboodiri & C. V. Jawahar.</i></p>
	<p>Compressing Video Calls using Synthetic Talking Heads</p> <p>33rd British Machine Vision Conference (BMVC), 2022.</p> <p><i>Authors: Madhav Agarwal, Anchit Gupta, Rudrabha Mukhopadhyay, Vinay Namboodiri & C. V. Jawahar.</i></p>
	<p>CDeC-Net: Composite Deformable Cascade Network for Table Detection in Document Images</p> <p>25th International Conference on Pattern Recognition (ICPR), 2020. (Oral)</p> <p><i>Authors: Madhav Agarwal, Ajoy Mondal & C. V. Jawahar</i></p>
INDUSTRIAL PROJECTS	<p>Object Detection and Tracking</p> <p>Trained various models to detect and track objects like Weapon, Person, Face, Helmet, Shoes, Safety Harness using our custom datasets in various different projects.</p> <p><i>Models Used:</i> Yolo, MobileNet, DeepSort, Kalman Tracker, IOU</p>
	<p>Pedestrian Attribute Recognition and Classification</p> <p>Identify the attributes of person like age, gender, clothes etc. and use them for classification.</p> <p><i>Models Used :</i> NASNet, ResNet-50, Inception-v2</p>
	<p>Documents and Invoice Understanding</p> <p>Extract information from invoices, bank statements, receipts etc. using combination of NLP and Computer Vision based techniques</p> <p><i>Models Used:</i> BERT, LayoutLM, Tesseract</p>
	<p>Satellite Images</p> <p>Detection and classification of ships, submarines using real time satellite images.</p> <p><i>Models Used :</i> R2CNN Faster-RCNN</p>
	<p>Smart Security and Surveillance Solution</p> <p>Developed various modules such as: Trespassing Detection, Person Count, Abandon Objects, Group Formation, Heat-Map Generation etc.</p>
ACHIEVEMENTS AND EXTRACURRICULAR ACTIVITIES	<ul style="list-style-type: none"> ➤ Served as a Reviewer for 26th International Conference on Pattern Recognition (ICPR). ➤ Received Graduate Scholarship from IIIT-Hyderabad to cover full tuition fee of MS degree. ➤ Member and Student Head Coordinator (2017-18) of Big Data Centre of Excellence, R&D Lab of AKGEC, for three years (2015-2018). ➤ Won 1st Prize in Big War event of BigDataThon'17 (24 Hours project making competition on Big Data technologies) organized by ABESIT, Ghaziabad (April 2017). ➤ Successfully organized 12 Hrs. Workshops on "Machine Learning and Neural Networks" (Feb 2018) and "Data Science" (March 2017) as a Mentor. ➤ Coordinator in 6th Summer School of AI (2022) organized by IIIT-Hyderabad. ➤ NPTEL certified in Python with an ELITE certificate. ➤ Secure 800/800 in National Programming Aptitude Test 2017 by NPTEL. ➤ Part of College Band, Media Team and Mental Health Group. ➤ Part of Tech Fest, Cultural Fest and Blood Donation Camp organizing teams. ➤ School Topper in Computer Science, batch of 2013.