

Vivek Kumar Varma Nadimpalli

Hyderabad, Telangana - 500035 • +91 8639394962 • nadimpalli.vivekvarma@gmail.com

Education

2015 – 2019
India

Dr B.R. Ambedkar National Institute of Technology

Jalandhar,

Bachelor of Technology in Computer Science and Engineering

- CGPA: 7.13/10

Work Experience

Jul'19 –
Bengaluru, India

Present

Wipro

Ltd.

Project Engineer, Research & Development Team, Interactive Experience Group

- Developed innovative intelligence and automation solutions using machine learning, Deep learning for augmented reality-based remote assistance systems and field agent assistance systems in low light conditions that helped various enterprises to perform repair and maintenance works efficiently. Currently working on automation of content creation and action prediction intelligence systems for AR/ VR technologies.
- Provided consultation and developed multiple use cases on combining mid-air haptics technology with deep learning in the field of car safety systems and banking security systems.
- Developed and deployed end to end automation of object detection solution from annotations to model testing on AWS server using Flask.
- Developed and deployed a feature-based face recognition system from single photo for fraud detection for an online interview bot.

May'18 –
Bengaluru, India

Jul'18

Wipro

Ltd.

Research Intern, Project: Human/Human Activities Detection Using Keypoints

- Developed a residual neural network for 12 human body keypoints detection like elbows, knees, shoulders, etc. and also extended the developed model for 24 hand keypoints and 68 face landmark keypoints.
- Developed multiple gestures detection module based on the movement of keypoints of human, hand, and head; based on deep learning and key points, developed a face recognition module with a single photo of the user.

Projects

Oct'19 – Feb'20

Conversion of Signboards from Hindi to Tamil Language

- The image of the signboard is taken for computation and using OCR techniques, after which the location of Hindi language text is detected; each character is recognized by the CNN model and context of the text is identified by LSTM model.
- Currently developing the final module for converting the recognized characters and context to the language that the user can understand using NLP techniques.

Jul'19 – Aug'19

Apparel Recommendation

- Recommends similar women's shirts, which can be altered with preference of brand/ colour/ visual appearance/ type.
- Data cleaning and pre-processed the women's clothes data from Amazon website.
- The system uses bag of words, TF-IDF for text similarity and a VGG16 CNN for image similarity.

Nov'18 – May'19

Music Generation using Deep Learning

- Worked on Jazz music generation and used MIDI data format.
- The MIDI data of the first 10 seconds of jazz music will be passed to an LSTM neural network and jazz music of the required length will be generated.

Feb'19

Phone Review Prediction

- The system predicts whether the phone will be liked or disliked by customers based on various features; the data is taken from Kaggle competition and a perceptron model is used for training.
- Finished in the top 12% of kaggle in class competition with a testing accuracy of 80.95% and testing accuracy of 84%.

Jan'18 – Feb'18

Image Classification Using Deep Learning

- The system is used to recognize the handwritten digits and classify them correctly.
- MNIST data was used for training the model; results achieved by the classifier revealed 96.57% accuracy on testing data and 97.6% on training data.

Jan'17

E-Commerce Website

- A prototype E-commerce website for selling electronic items.
- Used HTML, CSS for front end and SQL, PHP for the backend of the website.

Papers

- **“AI Based Remote Expert System for Guiding the Users on Machine Activities”** – Published in International Journal of Electronic Engineering and Applications. (<http://www.ijeea.in/volume-viii-issue-2>)
- **“AI Based Solution in Enhancing the Dark Images to Guide the Field Practitioners”** – Book Chapter accepted to DSDA 2020, will be published in CRC Press, Taylor & Francis Group USA in Jan-2021
- **“The Role of Object Detection, Tracking and Augmentation in Guiding the Remote Assistance Systems”** – Paper accepted for the Second International Conference on Adaptive Computational Intelligence, 2020.
- **“Question Answering Conversational System using Sentence Encoders”** - Paper accepted for Sixth International Congress on Information and Communication Technology, 2021.

Patents

- **“A system and method for car safety with mid-air haptics technology using facial input and deep learning”** -Status: Filed in Indian and US Patent Office.
- **“System and method for deception prediction using multimodal input and deep learning”** - Status: Filed in Indian and US Patent Office.
- **“System and method for AI based field assist in dark”** - Status: Filed in Indian and US Patent Office.
- **“Method and system for augmented reality content creation for remote assistance”** – Status: Filed in Indian and US Patent Office.
- **“A system and method of face generation of a user for virtual training environment”** – Status: Filed in Indian and US Patent Office.

Presentations

- Presented the paper ‘AI Based Remote Expert System for Guiding the Users on Machine Activities’ at the International E-Conference on recent trends in Engineering and Science - 2020
- Presented ‘Machine Learning and its Applications in Industries’ in the Future Ready session organized by Wipro Ltd in June 2020.
- Presented ‘Application of Machine Learning and Deep Learning’ in a seminar conducted by the Department of Computer Science and Engineering in Feb 2018.
- Presented ‘Artificial Intelligence Helping to Develop Sustainable Technologies’ in the Green Technology Course in April 2019.

Achievements

- Won the Best Paper award at International E-Conference on recent trends in Engineering and Science – 2020.
- Declared runner up of Code-it (Online Coding Competition) at Techniti'16.
- Secured the 6th rank in Text-Non text classification Kaggle In-class competition in 2019.
- Secured State first and national wide 47th rank in International Informatics Olympiad in 2005.
- Received Distinction certificate for C++ course from Aptech Computer Education in 2016.
- Winner of Mad Ads during Utkansh'2016.
- Runner up of Cineaste- short film contest during Utkansh'16.
- Winner in Badminton doubles during Inter Hostel League'17-18.
- Winner of Inter-Zone Kabaddi Competition in 2009-2010.
- Runner up of Inter-Brach Cricket Competition in 2009-2010.

Positions of Responsibility

- Secretary for Online Publicity - Utkansh'2019, college cultural festival and lead 30+ people in handling all social media presence of the festival.
- Editor and head of Institute's Movie Club and lead a team of 20+ memebers in creating videography content.
- Head of Publicity for cultural fest Utkansh'2017 and worked with various students in creating social media publicity content.
- Organizer for the Printing and Award distribution committee for the technical fest “Techniti'16”.
- An active member of Open Geest (Coding Society of NIT Jalandhar).

Technical Skills

- **Tools:** PyCharm, Code Blocks, Eclipse, NetBeans, JUnit testing, Adobe Premiere Pro, Adobe Photoshop, Unity Engine, AWS, Google Cloud Platform, CoreML.
- **Programming Languages:** Python, R, JAVA, C++, C, Swift, HTML, CSS, JavaScript, PHP, XML
- **Deep Learning:** Pytorch, TensorFlow, Keras, Scikit learn.
- **Computer Vision:** OpenCV, Tesseract, Google OCR.

- **Courses:** Python, C++, Machine Learning, Deep Learning, Data Science, Web Development.