

## Neel Ghoshal

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[Github](#) (@NeelGhoshal) • [Linkedin](#) (bit.ly/neelslinkd) • [Portfolio](#) (bit.ly/neelsport)

### Academic Qualification

Bachelors in Technology in Computer Science Engineering from Vellore Institute of Technology, Vellore, India from July 2020 expected to finish by July 2024.

### Publications

#### **“Chatbot for Mental Health Diagnosis using NLP and Deep Learning”** [Link](#) (bit.ly/mh-chatbot)

This paper included the development of a novel AI based chatbot application to converse with and simultaneously provide classification results into a class of a specific mental health ailment according to the real-time conversation.

#### **“Chest X-Ray Classification of Pneumonia Disease using EfficientNet and InceptionV3”** [Link](#) (bit.ly/ch-xray)

Contributed to this technical chapter based on explaining and evaluating the work done into classifying Chest X-Ray images based on the presence of pneumonia.

#### **“Chatbot for Mental Health Diagnosis using RASA and BERT”** (accepted to ‘International Journal of Embedded Systems’)

Formulated and developed a cohesive framework for a conversational model along with augmentation and deep learning techniques.

#### **“Real Time Visual Data Processing Using Neuromorphic Systems”** (accepted to ‘Primer to Neuromorphic Computing’, Elsevier)

Worked on this technical chapter, consisting of workings and variations of algorithms, sensors, analytical methods and practical applications of real time visual neuromorphic systems.

#### **“AI in Radiation Oncology”** (accepted to ‘Computational Intelligence for Oncology and Neurological Disorders’, CRC Press)

Methodized and implemented this technical chapter concerned with elaborating and explaining the various modalities and nuances related to the use of artificial intelligence in the field of radiation oncology.

#### **“AI applied to the Management and Operation of Solar Systems”** (accepted to ‘Biomass and Solar Powered Sustainable Digital Cities’, Wiley)

Executed written contributions towards inferential and explanatory works intended and pertaining towards the usage of artificial intelligence with respect to the management and operation of solar systems.

#### **“A Comprehensive Survey on Deep Learning-driven Object Detection and Tracking Techniques for Drone Images and Videos”** (in-progress)

Contributed to this paper related to the different variations and inherent functionalities of various methodologies of object detection techniques for drones, and the various applications that are generated forthwith.

#### **“Medical Transcription Classification using Machine Learning and Deep Learning”** (in-progress)

Worked on this paper related to the use of machine learning and deep learning methods to classify generalized medical transcription related textual data corresponding to its related specific medical specialty.

### Experience

#### **CODECHEF-VIT**

#### **Vice President**

Mentored and managed 200+ people associated with this chapter. Managed and conducted multiple large-scale events and competitions throughout the tenure amassing 4000+ overall participants. Overlooked technical aspects for the chapter.

Vellore, Tamil Nadu

11/2020-7/2023

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### RELIANCE JIO

#### Machine Learning Intern

5/2023-7/2023

Worked on building a Recommendation system for the organization for a consumer-based software platform product which hosts 100,000+ users. Created 20+ essential heuristic derivation functionalities for the facilitation of the filter-framework final model. Developed inferential solutions for behavior and pattern recognition tasks.

### ROTARY INTERNATIONAL (NGO)

#### Data Science Intern

9/2023-Present

Associated with work related to harnessing available data metrics related to localities with low socio-economic development factors for parameter extraction, classification and analysis for the Mumbai based organization of the NGO.

### Projects

#### NEURAL STYLE TRANSFER [Link](https://bit.ly/nst-vgg) (bit.ly/nst-vgg)

##### Technology: Tensorflow

Implemented a neural style transfer algorithm utilizing and tweaking the vgg19 model, able to stylize any input content image akin to a corresponding style image.

#### SALARY PREDICTION WEBAPP [Link](https://bit.ly/sal-pred) (https://bit.ly/sal-pred)

##### Technology: ScikitLearn, Streamlit

Machine Learning based salary prediction model, based on chosen multivariate attributes of dataset, obtained from StackOverflow developer survey data. The project is also deployed as a website.

#### WORKIN [Link](https://bit.ly/work--in) (bit.ly/work--in)

##### Technology: PoseNet, P5.js

Online Exercise training platform using the PoseNet library and built on p5.js as a framework. This project enables any individual to perform exercise related postures stretches with their web-cam on, the on-screen timer begins functioning only if the user performs a correct corresponding posture allowing for an easy and efficient platform for personal training.

#### VIRTUABLE [Link](https://bit.ly/virtuable) (bit.ly/virtuable)

##### Technology: OpenCV, Django

Web based online meeting variant, aimed at inclusivity of differently abled people with respect to virtual meets. The project allows differently-abled people to use hand gestures in order to navigate and utilize all the features which are generally available on such platforms including mute, unmute, hand-raise etc.

### Relevant Coursework and Awards

- Machine Learning by Andrew NG via Coursera
- Tensorflow Developer Certificate via Coursera
- Artificial Intelligence Analyst Certificate via IBM
- AWS Machine Learning Scholarship recipient via Udacity
- Individual Machine Learning and Artificial Intelligence Courses via VIT University
- Postman Student Expert
- Delegate at Harvard Asia Conference'21
- Won 2<sup>nd</sup> Prize at DevJams'21 Hackathon
- Won Best Freshers Prize at WomenTechies Hackathon