

# Vinayak Vinod Nayak

## AI Developer

AI Developer at Okkular actively seeking fulltime opportunities in the field of Data Science and Deep Learning. Looking to skilfully apply my conceptual understanding to deliver solutions in the field of Data Science and Data Analytics using Machine Learning techniques and consequently foster personal and organisational growth.

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## EDUCATION

### PGP In Data Science

#### International School of Engineering (INSOFE)

06/2019 - Present

Mumbai, India

##### Courses

- CSE 7402C: Statistics & Probability in Decision Modelling
- CSE 7305C: Methods & Algorithms in Machine Learning
- CSE 7124C: Foundations of Text Mining & Search
- CSE 7321C: Artificial Intelligence & Decision Sciences

### Bachelor of Technology in Mechanical Engineering

#### Veermata Jijabai Technological Institute

06/2013 - 06/2017

9.1 CGPA, Mumbai, India

##### Thesis/ Internship

- Simulated a Physical Vapor Deposition (PVD) system in C++ for a binary gaseous mixture as my Final Year Project in partial completion of Bachelors Degree under the Bhabha Atomic Research Center.
- Brainstormed and presented an optimal cost-effective solution to automate packing mechanism of Beedis subject to constraints on surface area and manufacturing process at IIT-Bombay as deliverables of a research internship.
- Finished 4th in a class of 70 students.

## WORK EXPERIENCE

### AI Developer

#### Okkular.io

03/2020 - Present

Mumbai, India

##### Responsibilities

- Create Tag-Gen Models for women's clothing with CNNs in fastai.
- Improvise novel techniques to improve performance of visual search with various Metric Learning approaches.
- Created text based tag generation using named entity recognition for electronic items such as fridges.

### Data Science Intern

#### International School Of Engineering (INSOFE) ✎

12/2019 - 03/2020

Mumbai, India

##### Project

- Implemented merge model in keras using LSTM and CNN to generate sequence of output words for an input image.
- Built a GUI Web App for the trained model above using Flask.

### Intern

#### Doshaheen Solutions Private Limited

11/2018 - 01/2019

Pune, India

##### Responsibilities/Tasks

- Preprocessed images to extract Serial Number and Readings from images of Digital Electric Meters. Used CVAT to annotate different elements in an image with respective tags (S No., LCD, LED etc.)
- Augmented Images using OpenCV and keras in python in order to train a deep CNN model for object detection and classification.

## SKILLS/PLATFORMS/LANGUAGES

Machine Learning

VBA

MS-Office

Python

R

Deep Learning

Tableau

fastai

HTML

CSS

JavaScript

prodi.gy

## HACKATHONS AND PROJECTS

### Age Detection of Indian Actors @ Analytics Vidhya (02/2020 - Present) ✎

- Implemented a CNN learner in fastai to classify images of actors belonging to either of three categories - Young, Middle-aged, Old.
- Used Transfer Learning with ResNet50 base architecture and fine-tuned the model with suitable learning rate to be ranked in the top 10%.

### Stock ticker alpha prediction @ INSOFE (11/2019 - 11/2019)

- Analyzed alpha signals for stocks in NYSE. Built a classifier to predict the alpha signal in partial completion of PGP course as part of final project hackathon,
- ML Models applied: Neural Network, Adaboost, Gradient boosted trees, XGB.
- Best Estimator: Neural Network - MLP with 1 hidden layer, text embedding layer for analyzing sentiment through tweets, categorical embedding layer to represent numerous stock tickers in a small vector space.

### Housing prices prediction @ INSOFE (09/2019 - 09/2019)

- Engineered a Regression model to predict flat resale prices in Singapore for partial completion of PGP course as part of Mid Term Hackathon.
- ML Models built: Random Forest, Decision Trees, XGBoost, Stacking. Best Estimator: Stacking Regressor.

## CERTIFICATIONS

### AI for medicine Specialization - deeplearning.ai @ Coursera (09/2020 - Present) ✎

Grade Achieved 98.7%

### Applied Machine Learning in Python - UoMichigan @ Coursera (02/2019 - Present) ✎

Grade achieved 99.2%

## ACHIEVEMENTS

### Bhaskaracharya Scholarship (10/2019 - Present)

Awarded INR 1,50,000/- for securing first place in Mid term hackathon and final Project Hackathon organized by INSOFE

### Diamond Jubilee Merit Scholarship (06/2014 - 06/2017)

Awarded INR 20,000/- per year by the Associated Cement Company for excellent academic performance across four years of BTech