



# Gokul Karthik

COMPUTER VISION GRADUATE STUDENT @ MBZUAI · BTECH IN INFORMATION TECHNOLOGY  
ARTIFICIAL INTELLIGENCE & COMPUTER VISION ENTHUSIAST · EXPLORING DIGITAL DEEP TECH ENTREPRENEURSHIP  
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## Education

### Mohamed Bin Zayed University of Artificial Intelligence | MSc in Computer Vision

📍 Abu Dhabi, UAE

CURRENT CGPA: 4 / 4

2021/Aug – 2023/May (Expected)

- Coursework: Machine Learning (ML701), Computer Vision (CV701), Geometry for Computer Vision (CV702), Visual Object Detection and Recognition (CV703), Trustworthy AI (ML708)
- ML701 Project: Multilingual Contrastive Training Approach for Low-resource Languages with mBERT for Question Answering
- CV703 Project: Self-supervised Pretraining of Object Detection Transformers

### Anna University | BTech in Information Technology

📍 Madurai, India

CGPA: 9.74 / 10 | DEPARTMENT RANK: 1 / 130 | THIAGARAJAR COLLEGE OF ENGINEERING

2015/Jul – 2019/May

- Awarded Gold Medal of Excellence (Overall Best Outgoing Student) out of 1000+ graduating students in 2019 batch
- Relevant Coursework: Object Oriented Programming, Data Structures and Algorithms, Web Technologies, Data Base Management System, Software Engineering, Big Data, Data Mining

## Experience

### Mohamed Bin Zayed University of Artificial Intelligence | Research Assistant (CV)

📍 Abu Dhabi, UAE

MENTOR: DR. KARTHIK NANDAKUMAR

2021/Jan – 2021/Jul

- Developed a double encoder architecture using Variational Autoencoders and GANs for unsupervised adversarial classification

### TCS Research & Innovation | Machine Learning Developer

📍 Chennai, India

MENTORS: DR. AVINASH ACHAR, DR. GIRISH PALSHIKAR; ACADEMIC COLLABORATOR: DR. BALARAMAN RAVINDRAN

2019/Apr – 2020/Nov

- Improved sales prediction models for the retails client using N-Gram models and Deep Neural Networks like RNNs and LSTM
- Implemented latest spatio-temporal travel time prediction models as baselines for evaluating temporal difference prediction models
- Developed intelligent employee profile retrieval system using text mining techniques
- Developed yield prediction model for hybrid corn crops to recommend effective crossing of species
- Developed computer vision pipelines to solve curved text extraction, perspective correction etc

### IIT Madras / One Fourth Labs / AI4Bharat | Deep Learning Project Intern

📍 Chennai, India

MENTORS: DR. PRATYUSH KUMAR, DR. MITESH KHAPRA

2018/Dec – 2019/Mar

- Developed robust scene text recognition architecture for Indian languages
- Implemented Efficient and Accurate Scene Text Detector (EAST) for Indian signboard scene text detection
- Developed handwriting recognition system using Convolutional Recurrent Neural Networks for automatic answer-script evaluation
- Set up programming competitions for the PadhAI Deep Learning course

## Publications

### Method And System For Forecasting Sales Based On N-Gram Model

Online

GOKUL KARTHIK, AVINASH ACHAR, BALARAMAN RAVINDRAN; INDIAN PATENT APPLICATION E-1/52276/2020-MUM

Oct-2020

### Dynamic Bus Arrival Time Prediction: A Temporal Difference Learning Approach

Online

VIGNESH LKP, AVINASH ACHAR, GOKUL KARTHIK; IJCNN - IEEE WCCI

Jul-2020

## Skills

### Technologies

Deep Learning, Computer Vision, Text Mining, Data Science

### Programming

Python, C++, R, MySQL,  $\text{\LaTeX}$

### Python Packages

PyTorch, Keras, Tensorflow, Scikit-Learn, OpenCV, NLTK, NetworkX, Numpy, Pandas, Matplotlib, Seaborn

### Platforms

Google Cloud Platform, Amazon Web Services, MS Excel, Tableau, QlikView

### Software Frameworks

Git, Streamlit, FastAPI, Flask, HTML, CSS, JS, Shiny, Android

## Certifications

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- 2021 **Generative Adversarial Networks (GANs) Specialization**, By Deeplearning.ai on Coursera
- 2020 **Futures Thinking Specialization**, By Institute for the Future on Coursera
- 2020 **Computer Vision Nanodegree**, By Udacity
- 2020 **Deep Learning Specialization**, By DeepLearning.ai on Coursera
- 2018 **Data Science Summer School**, By ACM and IIT Madras at Goa University
- 2018 **Data Analyst Career Track**, By DataCamp
- 2017 **Applied Data Science Specialization**, By University of Michigan on Coursera
- 2017 **Social Networks Course**, By IIT Madras on NPTEL (All India Rank 1)

## Mini Projects

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- 2020 **Standard Deep Learning Projects** - Baby Name Generation, Neural Style Transfer, Image Segmentation etc.
- 2020 **Cryptocurrency Market Prediction** - Using Long- and Short-term Time-series network (LSTNet).
- 2017 **GitHub Social Network Analysis** - Exploration of data science repositories

## Honors

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- 2021 **Winning Team** in the ADAFSA Agrithon for developing visual plant disease diagnosis, optimal animal clinic placement etc.
- 2021 **Finished Second** in the GITEX x AI-everything High Flyer challenge for the AI-powered dubbing presentation
- 2021 **Selected among the Top 10 teams** for the deep tech startup incubation program by Khalifa Innovation Center
- 2020 **Innovation Pride Award** by TCS for winning the Image Enrichment Challenge 2 out of 100+ participants
- 2020 **Winning Team Lead** of TCS DDS ML Hackathon out of 8 teams for developing the corn-hybrid recommendation system
- 2019 **Special Initiative Award** by TCS for the data driven solution to DDS profile hunt
- 2019 **Winning Team Lead** of IIT Madras AI Hackathon out of 500+ teams for developing safe route identification system
- 2019 **Gold Medal of Excellence** for the best outgoing student out of 1000+ students of TCE
- 2018 **Winning Team Lead** of Guvi-HCL AI Hackathon out of 30+ teams for developing the qualitative recommendation app
- 2017 **All India Rank 1** in the NPTEL course 'Social Networks'
- 2017 **Top 8** in the MHRD Smart India Hackathon out of Top 50 teams for the development of smart evaluation application