



# Gokul Karthik

ARTIFICIAL INTELLIGENCE & COMPUTER VISION ENTHUSIAST · EXPLORING DIGITAL DEEP TECH ENTREPRENEURSHIP  
RESEARCH ASSISTANT @ MBZUAI · BTECH IN INFORMATION TECHNOLOGY

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## Education

### Anna University, Thiagarajar College of Engineering

📍 Madurai, India

BTECH IN INFORMATION TECHNOLOGY

2015/Jul - 2019/Apr

- Awarded **Gold Medal of Excellence - Overall Best Outgoing Student** of 2019 batch
- Coursework: Data Structures & Algorithms, Data Base Management System, Web Technologies, Probability & Statistics, Data Mining
- CGPA: 9.74 out of 10 (97.4%); **Department Rank: #1**; Grade: First Class with Distinction

## Experience

### MBZUAI | Research Assistant #DeepLearning #Computer Vision

📍 Abu Dhabi, UAE

MENTOR: DR. KARTHIK NANDAKUMAR

2021/Jan - Present

- TBD

### TCS Research & Innovation | Machine Learning Developer #MachineLearning

📍 Chennai, India

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

2019/Apr - 2020/Nov

- Improving 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 (Winner - DDS Profile Hunt)
- Developed yield prediction model for hybrid corn crops to recommend effective crossing of species (Winner - DDS ML Hackathon)
- Developed computer vision pipelines to solve curved text extraction, perspective correction etc (Winner - Image Enrichment Challenge)

### IIT Madras / One Fourth Labs / AI4Bharat | Project Intern #DeepLearning

📍 Chennai, India

MENTORS: DR. PRATYUSH KUMAR, DR. MITESH KHAPRA

2018/Dec - 2019/Mar

- Experienced energetic starting up with the founding team of One Fourth Labs
- Implemented Efficient and Accurate Scene Text Detector (EAST) for Indian signboard scene text detection
- Developed handwriting recognition system using Convolutional Recurrent Neural Networks
- Set up programming competitions for the PadhAI Deep Learning course

### IIT Madras | Summer Research Fellow #TheoreticalMachineLearning

📍 Chennai, India

MENTOR: DR. HARISH GURUPRASAD

2018/Jun - 2018/Jul

- Experimented Attention models' impact on neural networks

### NPTEL | Teaching Assistant #SocialNetworks

📍 Online

COURSE INSTRUCTOR: DR. SUDARSHAN IYENGAR

2017/Dec - 2018/Mar

- Created programming assignments, handled the course forum and set up weekly quizzes for the 'Social Networks' course

### IIT Ropar | Research Intern #DataScience #NetworkScience

📍 Ropar, India

MENTOR: DR. SUDARSHAN IYENGAR

2017/Dec - 2018/Jan

- Analyzed GitHub users' role and behaviour in building repositories

## Recent Skills

### Technologies

Data Science, Machine Learning, Computer Vision, Text Mining

### Programming

Python, R, ~~TeX~~

### Data Science Libraries

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

### Platforms

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

### Software Frameworks

Git, HTML, CSS, JS, MySQL

## Publications

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

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

Online

Oct-2020

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

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

Online

Jul-2020

## Projects

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- 2020 **Indian Signboard Translation** - Detection, Classification & Recognition of Indian scene text.
- 2020 **Deep Learning Projects** - Baby Name Generation, Style Transfer, Image Segmentation etc.
- 2020 **Cryptocurrency Market Prediction** - Using Long- and Short-term Time-series network (LSTNet).
- 2018 **Qualitative Recommendation Engine** - Based on the mapping of user opinions to product features.
- 2017 **Twitter Analytics Dashboard of Topics** - Web app developed using Shiny
- 2017 **GitHub Social Network Analysis** - Exploration of data science repositories

## Certifications

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- 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)

## Honors

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- 2020 **Winner** of Image Enrichment Challenge 2 by TCS
- 2019 **Innovation Pride Award** by TCS for winning the MFDM AI Hackathon
- 2019 **Special Initiative Award** by TCS for the data driven solution to DDS profile hunt
- 2019 **Winner** of IIT Madras AI Hackathon for developing the safe route identification system
- 2019 **Gold Medal of Excellence** for the best outgoing student of TCE
- 2018 **Mentor** of HCL Madurai Hackathon
- 2018 **Winner** of Guvi-MithrAI-HCL AI Open Hackathon 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 for the development of smart evaluation app
- 2017 **Winner** of TCE IT Association Hackathon for developing insurance review analytics tool
- 2016 **First place** in the TCE-IEEE Demo Task contest for developing IoT based waterbody overflow alert system

## Volunteering

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### Anna University, Thiagarajar College of Engineering

📍 Madurai, India

AI WORK GROUP FOUNDER, ACM STUDENT CHAPTER CHAIR, NATIONAL SERVICE SCHEME MEMBER, ROTARACT CLUB MEMBER,  
STUDENT REPRESENTATIVE, PLACEMENT REPRESENTATIVE, IT ASSOCIATION MEMBER,  
CAMPUS AMBASSADOR FOR ANALYTICS VIDHYA, SHAASTRA & PRAGYAN

Jul-2015 - May-2019

## Recreations

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**Follow up** Indian Politics, Tech Entrepreneurship, Education

**Explore** Food Varieties, Coursera, Netflix, Social Media

**Physical Activity** Workout, Yoga, Badminton