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*

- Working on Adversarial Defense techniques

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*

- Improved sales prediction models for the retails client using N-Gram models and Deep Neural Networks like RNNs and LSTNet
- 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 | 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 *#MachineLearning* 📍 *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, LaTeX
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

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*

Projects

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

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)

Honors

2020	**Innovation Pride Award** for winning the Image Enrichment Challenge 2 by TCS
2020	**Winner** of TCS DDS ML hackathon for developing the corn-hybrid recommendation system
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	**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 for developing IoT based waterbody overflow alert system

Volunteering

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,   *Jul-2015 - May-2019*

Campus Ambassador for Analytics Vidhya, Shaastra & Pragyan

Recreations

Follow up	Indian Politics, Tech Entrepreneurship, Education
Explore	Food Varieties, Coursera, Netflix, Social Media
Physical Activity	Workout, Yoga, Badminton