MADHAV SANKAR KRISHNAKUMAR

(+91) 9884850987 ◇ madhavsankar@gmail.com

madhavsankar.github.io ◇ LinkedIn: madhavsankar

EDUCATION

National Institute of Technology, Tiruchirappalli *2015 - 2019*
B.Tech. (with Hons) in Computer Science and Engineering
CGPA: 9.69/10.00 Honors CGPA: 10.00/10.00 Rank: 3/103
Noteworthy Electives: Pattern Recognition, Natural Language Processing, Cloud Computing, Data Warehousing and Data Mining

INDUSTRIAL EXPERIENCE

1. Software Engineer, Microsoft *Jul 2019 - Present*
● As part of the Compliance Core team of M365 Security and Compliance, enabled the solution to track employee compliance responsibilities to Go-Live in 6 months despite being the only person working on it and was rewarded with immediate promotion
● Designed a connector to import large items from third-party data sources into Microsoft 365 so that compliance solutions can be applied on them, overcoming the current size restriction on the solutions.

2. Software Engineer Intern, Microsoft *May 2018 - Jul 2018*
● As part of Version-1 SharePoint Desktop Team, enhanced user experience by reducing End User-Perceived Latency(EUPL) on the SharePoint Desktop App using Progressive Web Applications(PWA) concepts
● Implemented Web Parity changes to separate the Desktop App from Web View Hosted App, along with System Tray and background task features.

RESEARCH EXPERIENCE

1. RNN based Question Answer Generation and Ranking for financial documents using Financial NER
Supervisor : Dr. Rajeswari Sridhar *Jan 2019 – Jun 2019*
● Developed a Financial NER with CRFs that achieved an accuracy of 92% in identifying financial key-phrases
● Modified existing question-generation and answer-extraction modules to incorporate information from Financial NER; ROUGE-L score of answer extraction module increased from 0.909 to 0.969.

2. Research Intern, Indian Institute of Technology, Hyderabad
Supervisor : Dr. Sparsh Mittal *Dec 2017*
● Investigated various Convolutional Neural Network models and compression techniques to reduce the memory and time overhead in the processing of the image.
● Developed a live video captioning model called **ViewPal** that was based on combining the information extracted from the video using a Convolutional Neural Network and extracting this information using a Recurrent Neural Network into a stream of meaningful sentences. Reads out the sentence to aid the visually challenged by providing a live relay of events around them.

3. Research Intern, Indian Institute of Technology, Madras
Supervisor : Dr. John Augustine *May 2017 - Jun 2017*
● Solved the problem of dispersion of 'n' mobile robots on an 'n' node ring in presence of two types of dynamism in the underlying graph: (i) vertex permutation and (ii) 1-interval connectivity.
● Designed an asymptotically time optimal algorithm to achieve dispersion when robots do and do not have chirality, subject to different constraints and proved the impossibility results for dispersion when robots have no visibility.

PUBLICATIONS

1. Deterministic dispersion of mobile robots in dynamic rings *ICDCN 2018*
2. RNN based Question Answer Generation and Ranking for financial documents using Financial NER *Sadhana 2020*

TECHNICAL SKILLS

Online Certifications Machine Learning, Python for Data Science and AI, Deep Learning Specialization, Game Theory
Languages C/C++, C#, Python, JavaScript
Tools and Libraries Linux, Git, Pytorch, TensorFlow, Keras, scikit-learn, numpy, pandas, matplotlib, .NET Framework, Django

AWARDS AND SCHOLARSHIPS

● Computer Science and Engineering **Department Topper of Final Year** *2019*
● Project selected for financial aid at **Microsoft Annual Hackathon** *2019*
● Among the top 25 high school students across the country who were invited to watch the Indian Republic Day Parade as **special guests from the Prime Minister's Box**. Had an All-India rank of 15 among 1.2 million students who took the examination. *2016*
● Received **Kishore Vaigyanik Protsahan Yojana fellowship**, presitigious scholarship awarded to the top science stream student across the country. Had an All-India rank of 35 among 50,000 students. *2015*

EXTRA-CURRICULAR ACTIVITIES

Volunteer at Illuminate, NGO which aims to provide quality education to kids of nearby villages. *2016- 2019*
Head of Sparsh, Social Responsibility wing of Vortex, the Computer Science and Engineering symposium. *2018 - 2019*
Coordinator of Workshops team of Vortex, the Computer Science and Engineering symposium. *2018 - 2019*
Manager of Public Relations team of Pragyan, Techno-management fest of NIT Trichy. *2016- 2019*