SAI HARSH TONDOMKER

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PROFESSIONAL SUMMARY

· My objective is to attain a dynamic and challenging platform, which would offer an opportunity to me to follow my passion in Software Engineering and Development. I intend to add value to whatever I do to the best of my abilities. My main area of interest is Algorithmic Graph Theory and Parallel computing apart from that, I am also interested in Data Structures, Data Analysis and manipulation.

EDUCATION

International Institute of Information Technology, Hyderabad *2017 - Present*
MS by Research in CSE at C-STAR Lab CGPA: 8.60
Indian Institute of Information Technology, Chittoor *2013 - 2017*
B.Tech in ECE and **Honors in Computer Science** CGPA: 8.00

EXPERIENCE

Google Summer of Code Intern, SageMath May 2018 - August 2018
Mentors: Prof. David Coudert(INRIA) and Prof. Dima Pasechnik(University of Oxford) *Hyderabad, India*

· Designed computationally efficient methods to decompose a (multi)graph into triconnected components and later construct a tree. These modules will be useful in for several graph problems such as Hamiltonian Cycle, travelling salesman problem etc.
· Implemented functionality for estimating closeness centrality and computing ear decomposition, project link.

Python Developer Intern, Technical University of Valencia, Spain May 2017 - Feb 2018
with PhD student lavanya addepalli *Hyderabad, India*

· Designed an event based multi-model classification to study the nature of user participation level on social networks.
· We investigated that when an event is spread like wildfire, most of the inactive users became active. Our prediction model has decent accuracy.

Research Intern, Indian School of Business November 2017 - March 2018
(Global Rank:27th for MBA) Mentors: Prof. Siddharth Sharma *Hyderabad, India*

· Investigated the effects on other stores in a mall if a popular store removed/closed.
· The above problem is approached by analyzing the snaps of mall on every month and constructing a graph from center of each store.

Research Intern, IIIT-Hyderabad May 2016 - August 2016
Mentors: Prof. Kishore Kothapalli *Hyderabad, India*

· Breaking the time complexity of an existing algorithm of Ear Decomposition(an algorithm to find the Bi-connectivity of a graph).
· Concluded with 2X Speed Up. It was published in CTW-2017 Germany PDF.

Teaching Assistant, IIIT Chittoor August 2014 - December 2016
Data Structures, Algorithms, Math-I & Math-III *Chittoor, India*

· Conducting recitation sessions, designing lab, homework assignments and grading tests.

QGIS Developer Internship, IIC Technologies, Hyderabad. August 2017 - November 2017

· Built a QGIS plugin which helps to understand the weather information, predicts its trend and displays the interpolation.
· As the project built on the open source platform, it has dropped down the cost from 25 Lakhs to Zero.

SELECTED PROJECTS

Finding Important Nodes in social network Aug. 2015 - Jan. 2016
with Prof. Kishore Kothapalli *IIIT Hyderabad*

· Designed scalable algorithms for estimating the closeness centrality value for each node in a sparse network.
· Concluded that it's advantage to decompose a graph into its 2-connected component.

Shortest Fast Path Algorithm in Temporal Graphs Aug. 2015 - Jan. 2016
with: Dr. Ramakrishna.G *IIIT Sri City*

· Implemented an Algorithm to find the fastest path among all Shortest paths in Temporal Graph which have time stamps and weights on each edge.

Crowd Steering (MIT Media Labs) July 2015- Sept 2015
with PhD student Lavanya Addepalli and Prof.Ramesh Raskar(MIT) *Kumbhathon-Nashik*

· Developed a real time framework built upon python and Amazon EC2 to do crowd analytic and predict flow of crowd using Heat-map.

TECHNICAL STRENGTHS

Computer Languages	C, C++, Python, Cython and Basic in MATLAB, HTML,CSS, SUMO, R
Software & Tools	QGIS, LaTeX, Web2py, Django

COURSE WORK

· Data Structures & Algorithms
· Advance Algorithms, Complexity Theory & Graph Theory
· Artificial Intelligence & Machine Learning
· Distributed Systems & Spatial Information Systems
· Principle of Programming Language(Awarded Hons Certificate)

HONORS & AWARDS

· **Student Travel grant**, Indian Symposium on Computer Systems IIT-Hyderabad September - 2018 and IEEE International Conference on High Performance Computing, Data,and Analytics(HiPC), November - 2018
· Received **Dean's Research Award** in Semester - VIII (Spring 2017)
· Honor Code Certificate from **MITx** for successfully completing a course on *"Introduction to Computer Programming Using Python".*
· HackerEarth Campus Ambassador and selected in Internshala Student Partner 6.0.
· Certificate for **High Performance Parallel Computing** course which was held in IIT Madras.