

## Rahul Bothra

<https://rahul-bothra.github.io/>

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<b>Research Interests</b>	Networks and Systems.	
<b>Education</b>	<b>Birla Institute of Technology and Science, Pilani</b> B.E. (Hons.) in Computer Science (2016 - 2019)	
<b>Experience</b>	<b>Research Fellow, Microsoft Research</b> Advisor: Ramachandran Ramjee <ul style="list-style-type: none"><li>Working on optimizing communication for distributed DNN training in data centers.</li></ul>	2020 - Present
	<b>Software Engineer, Microsoft R&amp;D</b> Manager: Priyank Gaharwar <ul style="list-style-type: none"><li>Worked on Azure Migrate to devise a communication protocol to scale out migration nodes on customers' datacenter</li><li>Added robustness and failovers to data communication from customers' datacenter to Azure</li></ul>	2019 - 2020
	<b>Engineer, Hyperloop India</b> <ul style="list-style-type: none"><li>Built an efficient halbach array design for levitating the Hyperloop pod with Neodymium magnets</li><li>Among 24 finalists in SpaceX Global Challenge</li></ul>	2016 - 2017
<b>Research Projects</b>	<b>P4-TrafficTool</b> Advisor: Prof. Ben Leong, NUS Singapore <ul style="list-style-type: none"><li>TrafficTool generates 'plugin code' for tools like Scapy, MoonGen for packet generation and parsing of headers specified in P4 code</li></ul>	2020
	<b>Heuristic solutions for Clustered Orienteering Problem</b> Advisor: Prof. Abhishek Mishra, BITS Pilani <ul style="list-style-type: none"><li>Developed heuristics for Clustered Orienteering Problem with Genetic Algorithm and Swarm Optimization techniques.</li><li>Improved performance by 8% and accuracy by 5% than state-of-the-art</li></ul>	2019
	<b>Reducing image distortion via object aware Seam Carving</b> Advisor: Prof. Pramod Tanwar, CSIR CEERI <ul style="list-style-type: none"><li>Identified conditions which created large distortion of certain objects in a seam-carved image.</li><li>Added neighborhood pixel weighing of seams to reduce this effect.</li></ul>	2018
<b>Teaching Positions</b>	<b>Teaching Assistant, BITS Pilani</b> Professors: Shan B., Sundaresan R. et. al. Courses: Logic in Computer Science (CS F211), and Programming (CS F111)	2018 - 2019
<b>Academic Honors</b>	KYPY Fellowship by Dept. of Science and Technology, Govt of India NTSE Scholarship by NCERT Council, Govt of India	