

## Rahul Bothra

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

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<b>Education</b>	<b>Birla Institute of Technology and Science, Pilani</b> B.E. in Computer Science	2016 - 2020
<b>Experience</b>	<b>Research Fellow, Microsoft Research</b> Advisor: Venkat Padmanabhan, Ranjita Bhagwan Working on WAN TE and capacity planning to reduce COGS for Azure WAN. Also working on understanding application sensitivity to network performance.  Advisor: Ramachandran Ramjee Designed a system that leverages data center network properties and improves communication throughput for DNN training in Azure by upto 45%.	2020 - Present
<b>Projects</b>	<b>P4-TrafficTool</b> Advisor: Prof. Ben Leong, NUS Singapore TrafficTool parses P4 code to generate a spec for the implemented protocols, which can then be used by packet generation tools like Scapy, MoonGen, etc.  <b>Heuristic solutions for Clustered Orienteering Problem</b> Advisor: Prof. Abhishek Mishra, BITS Pilani Clustered Orienteering is an exponentially harder variation of the Travelling Salesman Problem. Designed a GA and Swarm Optimization heuristic which improved performance by 38% and accuracy by 5% than state of the art.  <b>Reducing image distortion via object aware Seam Carving</b> Advisor: Prof. Pramod Tanwar, CSIR CEERI Identified conditions under which important parts of an image can get distorted by Seam Carving and designed an object-aware technique to reduce these distortions.  <b>Hyperloop India, SpaceX Global Challenge</b> Designed and manufactured a halbach array design with Neodymium magnets to levitate the Hyperloop pod. Our technique had the most cost efficient Lift to Drag performance in the competition.	2020  2019  2018  2017
<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)  <b>Mentor, Google Open Source Programs</b> Mentored university and high school students in working with open source projects	2018 - 2019  2018 - 2020
<b>Academic Honors</b>	KYPY Fellowship by Dept. of Science and Technology, Govt of India NTSE Scholarship by NCERT Council, Govt of India	