Bhaskar Kataria

Ph.D. Student, Cornell University

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Education

Cornell University — Ithaca, NY
Ph.D. in Computer Science (F1 Visa) — *2024 – 2029*

National Institute of Technology Karnataka — Surathkal, Karnataka
Bachelor of Technology in Computer Science and Engineering — *2018 – 2022*

Experience

Microsoft Research
Research Fellow, *Advisor: Dr. Venkat Padmanabhan* — *July 2022 - July 2024*
Worked on optimizing compute and network scheduling and improving resilience for Microsoft Teams

Goldman Sachs
SWE Intern, *Global Markets Team* — *May 2021 - July 2021*
Worked on stress testing and optimization of REST server used in the calculation of metrics for financial institutions

Google Summer of Code with ns-3 Network Simulator (source)
Intern, *Advisor: Dr. Tom Henderson* — *May 2020 - July 2020*
Worked on implementation and evaluation of Low Latency Low Loss and Scalable Throughput (L4S) architecture for various queueing disciplines

Selected Publications

Saving Private WAN: Using Internet Paths to Offload Private WAN Traffic in Conferencing Services (link to preprint)
CoNEXT 2024
Bhaskar Kataria, Palak LNU, Rahul Bothra, Venkat Padmanabhan et. al.

Programmable Data Plane for New IP using eXpress Data Path (XDP) in Linux (link)
Invited paper at HPSR 2022 and Presented demo at ICIN 2022
Bhaskar Kataria, Rohit MP, L Monis, MP Tahiliani, K Makhijani

TinTin: Tiny In-Network Transport for High Precision INdustrial Communication (link)
ICNP 2022
K Makhijani, **Bhaskar Kataria**, D Shashank, D Devkota, MP Tahiliani

On the importance of Traffic Control subsystem in ICN-based industrial networks (link)
ANTS 2020
AH Nagaraj, **Bhaskar Kataria**, A Sohoni, MP Tahiliani, D Tandur, H Satheesh

Projects

Design and Implementation of the New IP stack (source)
Advisor: Prof. Mohit P. Tahiliani, Kiran Makhijani
Designed and implemented a novel New-IP architecture to handle time bounded traffic and asymmetric addressing schemes

Bachelor's Thesis on Implementation of NAT44 and NAT64 using TC-BPF and eXpress Data Path (XDP) (source, publication)
Advisor: Prof. Mohit P. Tahiliani
By using eBPF based XDP and TC-BPF, bypassed most of the Linux kernel to implement a high speed NAT.