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# Gohar Irfan Chaudhry

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## Employment

<b>Software Engineer</b> Windows Group	<b>Microsoft</b>	(July 2018 - Present)
<b>Software Engineer, Intern</b> Customer Simulation Lab	<b>Cloudera</b>	(May 2017 - August 2017)
<b>Software Engineer, Intern</b> Network Devices Team	<b>Veriflow</b>	(March 2016 - May 2017)

## Technical Experience

- **Fully-Immersive Audio in (Almost) Real-Time** (January 2017 - May 2017)
  - Developed a highly parallel *CUDA-based* framework for leveraging *NVIDIA GPUs* to process audio signals encoded using *Higher Order Ambisonics (HOA)* - tailored for improving sound in *Virtual Reality* devices.
  - Up to *36.7x speedup* in computing decoder matrices on various regular/irregular speaker layouts.
- **MegaVM - A Memory Enhancing Framework for Datacenters** (June 2015 - May 2016)
  - Enhanced the memory modules of *Xen* and *KVM (Linux Kernel)*.
- **Towards Predictable and Resilient Datacenters** (May 2014 - February 2015)
  - Proposed a network topology and a resource management scheme to achieve better resilience properties.
  - Developed a high-performance flow-level simulator in *C++* for modeling the proposal.

## Education

- **University of Illinois at Urbana-Champaign - MSc Computer Science** (August 2016 - May 2018)
  - Research Assistant to Professor Matthew Caesar
- **Lahore University of Management Sciences - BSc Computer Science** (August 2012 - May 2016)

## Additional Experience and Awards

- **Winner of Microsoft Azure Cloud Challenge** (May 2016)
  - Developed an SMS Spam Detection application using the *Azure Machine Learning* API.
- **iBridge Berlin** (May 2015)
  - Selected for a Tech-Entrepreneurship conference held in Berlin by *iBridges* and *UC Berkeley*.
- **Teaching Assistant** (2014 - 2017)
  - *CS484* Parallel Programming (*OpenMP*, *MPI*, *Charm++*), *CS473* Network Security (*C*, *C++*), *CS382* Net-Centric Computing (*Java*), *CS125/200* Introduction to Programming (*Java*, *C++*)

## Publications

- **High Coverage Testing of Softwarized Networks** Santhosh Prabhu, **Gohar Irfan Chaudhry**, Brighten Godfrey and Matthew Caesar. *ACM SIGCOMM 2018 Workshop on Security in Softwarized Networks: Prospects and Challenges*
- **MegaVM - A Memory Enhancing Framework for Datacenters** Rashid Tahir, **Gohar Irfan**, Bilal Bakht, Hashim Sharif, Fareed Zaffar, Matthew Caesar. *Proceedings of the 13th USENIX Symposium on Networked Systems Design and Implementation (NSDI '16)*, Santa Clara, CA, USA

## Languages and Technologies

- C++, Python | OpenMP, MPI, CUDA, Linux, TCP/IP