Longitudinal Analysis of Internet Speed Data in the Gulf Cooperation Council Region

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Abstract : This paper presents a longitudinal analysis of Internet speed data in the Gulf Cooperation Council (GCC) region, focusing on the most populous cities of each of the six countries – Riyadh, Saudi Arabia; Dubai, UAE; Kuwait City, Kuwait; Doha, Qatar; Manama, Bahrain; and Muscat, Oman. The study utilizes data collected from the Measurement Lab (M-Lab) infrastructure over a five-year period from January 1, 2019, to December 31, 2023. The analysis includes downstream and upstream throughput data for the cities, covering significant events such as the launch of 5G networks in 2019, COVID-19-induced lockdowns in 2020 and 2021, and the subsequent recovery period and return to normalcy. The results showcase substantial increases in Internet speeds across the cities, highlighting improvements in both download and upload throughput over the years. All the GCC countries have achieved above-average Internet speeds that can conveniently support various online activities and applications with excellent user experience.

Keywords : internet data science, internet performance measurement, throughput analysis, internet speed, measurement lab, network diagnostic tool

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