

## PREFACE

The image of the Earth at night has always amazed me. With the most populous areas shining bright against the sheer darkness of the night, these images mesmerize the viewer. One cannot refrain from checking out his/ her country or region on these night-light maps to see how they look at night from space. The beauty of these images is not limited to the bright city lights; all the major highways and roads can also be lit up along river or lakes shorelines. In the mountains or dense forest regions, if one strains his/ her eye, a dim light can always be spotted, probably belonging to the tribal people or forest officer's post. All these amazing night-lights never disappoint me, and as I would like to say, "One light has numerous stories behind it."

My first introduction to VIIRS NTL data was through my manager at ESRI India, Mr Shivaprakash Yaragal. While looking for ideas for my project, he suggested that I look through this data, and when I did, I realized there is much more to these night lights than just beauty. After spending a few weeks looking at the data and literature, it was clear that this would be my research topic. Looking at the footprints of humans on our planet from space, that too at night, was itself a technological achievement of humankind. Soon, the literature made me understand the relationship between night-lights and economics.

I was new to the idea of Econometrics, being from Geoinformatics. However, understanding electricity or night-light distribution based on VIIRS data was very intriguing. The combination of Economics with statistics and Geography is a novice and holds much weight, especially in countries where data is scarce. This "Spatial Econometrics" or "Geo-Econometrics" has a direct relation to developmental factors on land. Understanding the world through space at night-time and applying statistical models to make out patterns is far more convenient than ground surveys. Reliability can also be achieved through various validation models. Moreover, this method is cheap and accessible to anyone with knowledge, interest, and the internet!

I am glad to take such a topic for my project, which has direct application in development and policymaking, which will contribute towards growth in electricity/night-light distribution and the betterment of people. Everyone on this planet deserves a bit of brightness in their life.