Anagha Uppal is a first-year graduate student in the Geography department at UCSB. She received her BA in Computational Social Science from the University of Tennessee, Knoxville. She aims to use the technical skills she earns through her bachelor’s and graduate degrees to adopt technology in the development of community-based solutions to local issues. Her passion is the food justice movement, and her research and activism is largely based around university organizations that promote a reduction of food waste, the consumption of better food, and the addressing of food insecurity. Her research interests fall at the intersection between technology, GIS and agent-based modeling, with social justice, computational social science, and food waste and food insecurity. She has served as the training director for the local non-profit organization East Tennessee Peace & Justice Center.

Position Paper

Location analytics and business-oriented research are all about optimization. Although my experience with geography and GIS is limited, I have expressed interest in the topic of optimization since my introduction to geographic information systems. For my final project during my introductory GIS course, I evaluated the efficiency of library placements in my county in terms of patronage and distance traveled by patrons. I later led a more extensive GIS project for the nutrition department at my university wherein I developed an interactive mapping tool of the food sources, public health indicators and demographic data in the 16 countries that make up East Tennessee for the use of any academian, policymaker or activist to study local trends in nutrition and health. This was to ensure that reliable methods are used to improve food access so that people are positively impacted and funds are not wasted.

This intersection between social issues and GIS/GIScience would serve as my focus and my intended contribution to this workshop and to this emerging field. Specifically, I would hope to apply these questions, topics and technologies for nonprofit businesses that address UN Sustainable Development Goals. SDGs are valuable in condensing and prioritizing the most vital needs of the population today. In terms of food security and nutrition, for instance, the Huff Model—which is used to calculate the probability that a person from any given location will visit a particular store and predict the sales potential of potential store locations—has been applied alongside a number of other models to determine spatial rates of high food insecurity in the Minneapolis area. It would be fascinating to explore this and similar models further through this workshop.

I am currently a first-year graduate (MA/PhD) student in the Department of Geography at UCSB in the STKO lab. I finished my undergrad in the spring, where I studied an interdisciplinary course
titled Computational Social Science, for which I took classes in GIS, data mining and analytics using R and NCSS, database management, more advanced HTML skills, and network analysis using Gephi, as well as courses in sociology, political science, information science and the non-profit model. I graduated with a minor in Business Analytics. I therefore supply both an interdisciplinary perspective and prior knowledge of business analytics themes and goals, as well as strong communication skills and adaptability to new material and perspectives.