

# AISHWARYA VENKAT

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## PROFESSIONAL SUMMARY

Experienced geospatial analyst studying food systems resilience and climate-food-health nexus. Strengths include spatiotemporal alignment and data wrangling in Python and R to extract novel interdisciplinary insights. Recent subject matter expertise includes extreme weather event measurement from remote sensing data, and linkages to food security including acute malnutrition seasonality, diet costs and affordability, and famine early warning.

## EDUCATION

- Friedman School of Nutrition Science and Policy, Tufts University** *Expected May 2024*  
PhD, Agriculture, Food, and Environment  
*Dissertation:* Environmental Hazards in the Global Food System
- School of Engineering, Tufts University** *May 2018*  
MS, Environmental and Water Resources Engineering  
Certificate in Water Systems, Science, and Society  
*Thesis:* Sub-Basin Valuation of Groundwater in California, 2000-2016
- Virginia Polytechnic Institute and State University (Virginia Tech)** *May 2014*  
BS, Biological Systems Engineering  
Secondary Major Certificate, French

## SKILLS

<i>Spatial analysis:</i> R, Python, ArcGIS, QGIS, Geoda	<i>Scientific communication and writing</i>
<i>Econometric modeling:</i> R, Python, Stata	<i>Ideation and methodology development</i>
<i>Languages:</i> English, French, Tamil, Hindi	<i>Activity management and training</i>

## EXPERIENCE

- Consultant, The Micronutrient Forum** *2023-2023*  
Developed and drafted literature review of climate hazard measurement in nutrition  
Performed analysis of extreme weather effects on stunting and wasting outcomes using 30 years of USAID Demographic and Health Surveys
- Research Assistant, Food Prices for Nutrition** *2020-2021*  
Conducted comparison of least-cost diets using WB ICP data and 11 dietary guidelines  
Established codebase and completed joint evaluation of Healthy Diet Basket guideline  
Developed technical tools to facilitate calculation of Cost of Healthy Diet

## Research Assistant, Feinstein International Center (FIC)

2018-2020

- *Contribution:* Conducted analysis of anthropometric and climatological data to contextualize acute malnutrition trends in Kenyan drylands  
*Activity:* [NAWIRI \(MILE\) Development and Food Security Activities in Kenya](#)  
*Project Leads:* CRS, FIC
- *Contribution:* Performed study of long-term climate patterns in Darfur  
*Activity:* [Taadoud Transition to Development Project](#)  
*Project Leads:* DFID, FIC
- *Contribution:* Implemented study of short-term (1990-present) seasonal patterns of climatic indicators in the Darfur region and links to farmer-herder violence  
*Output:* [Twin peaks: seasonality of acute malnutrition, conflict, and environment](#)  
*Project Leads:* FAO, FIC

## Research Assistant, Center for Humanitarian Change

2019-2019

*Contribution:* Studied alignment of Integrated Phase Classification (IPC) and Household Hunger Scale (HHS) in SMART contexts with survey data from 336 households

*Output:* [Classifying Acute Food Insecurity Using the Household Hunger Scale: Evidence from Three Countries](#)

## TEACHING ACTIVITIES AND ASSISTANTSHIPS

- UEP 294: Spatial Statistics, Tufts University (Spring 2019)
- Tufts University GIS Data Lab Assistant (Fall 2014 – Spring 2018)
- EN 1: Applications of Climate Change Engineering, Tufts University (Fall 2016)
- CEE 194: Intro to GIS, Tufts University (Summer 2016)
- ENVR-S 171: Water, Health and Sustainable Development, Harvard University Extension School (Spring and Summer 2016)

## HONORS AND AWARDS

Outstanding Recent Alumni, Virginia Tech College of Agriculture and Life Sciences 2020  
United States Geospatial Intelligence Foundation Scholarship 2015

## VOLUNTEER ACTIVITIES

*2023 Tufts University Famine Forecasting Hackathon*

Collaborated with interdisciplinary team of conveners to compile presentations and datasets, designed [website](#), facilitated analysis and discussions with two global teams

*Co-Chair, 2018 Nutrition Data Summit*

Coordinated with student volunteer committee to plan sessions, invited and scheduled panelists and plenary speakers, managed event logistics, designed website and program

## PUBLICATIONS

Headey, D., and **A. Venkat**. (2024). [Extreme weather and undernutrition: A critical but constructive review of the literature](#). IFPRI Discussion Paper 02236. Washington, DC: International Food Policy Research Institute.

**Venkat, A.**, Marshak, A., Young, H., & Naumova, E.N (2023). [Seasonality of Acute Malnutrition in African Drylands: Evidence From 15 Years of SMART Surveys](#). Food and Nutrition Bulletin. 44(2\_suppl):S94-S108. doi:10.1177/03795721231178344.

Cliffer, I.R., Marshak, A., Schneider, K.R., **Venkat, A.**, Naumova, E.N., 2023. [Seasonality of nutrition](#). In: Caballero, B. (Ed.), Encyclopedia of Human Nutrition, vol. 4. Elsevier, Academic Press, pp. 350–368.

Herforth, A., **Venkat, A.**, Bai, Y., Costlow, L., Holleman, C. & Masters, W.A. (2022). [Methods and options to monitor the cost and affordability of a healthy diet globally. Background paper for The State of Food Security and Nutrition in the World 2022](#). FAO Agricultural Development Economics Working Paper 22-03. Rome, FAO.

Marshak, A., **Venkat, A.**, Young, H., & Naumova, E. N. (2021). [How seasonality of malnutrition is measured and analyzed](#). International Journal of Environmental Research and Public Health, 18(4), 1828.

Herforth, A., Bai, Y., **Venkat, A.**, Mahrt, K., Ebel, A., & Masters, W. A. (2020). [Cost and affordability of healthy diets across and within countries: Background paper for The State of Food Security and Nutrition in the World 2020](#). FAO Agricultural Development Economics Technical Study (Vol. 9). Food and Agriculture Organization.

**Venkat, A.**, Falconi, T. M. A., Cruz, M., Hartwick, M. A., Anandan, S., Kumar, N., Ward, H., Balaji, V., & Naumova, E. N. (2019). [Spatiotemporal Patterns of Cholera Hospitalization in Vellore, India](#). International Journal of Environmental Research and Public Health, 16(21), 4257.

Simpson, R. B., **Venkat, A.**, Alarcon, T., Chui, K., Naumov, Y., Gorski, J., Bhattacharyya, S. & Naumova, E. (2019). [Calendar effects to forecast influenza seasonality: A case study in Milwaukee, WI](#). Online Journal of Public Health Informatics, 11(1).

**Venkat, A.** (2018). [Sub-basin Valuation of Agriculture: A Crop-specific Assessment of Groundwater Footprints and Value in California](#). (Master of Science dissertation, Tufts University).

Cruz, M. S., Alarcon-Falconi, T. M., Hartwick, M. A., **Venkat, A.**, Ehrlich, H. Y., Anandan, S., & Naumova, E. N. (2017). [From hospitalization records to surveillance: The use of local patient profiles to characterize cholera in Vellore, India](#). PloS one, 12(8), e0182642.