AISHWARYA VENKAT

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PROFILE

Experienced geospatial analyst studying food systems resilience at the climate-food-health nexus. Key research themes include extreme events, seasonal patterns of acute malnutrition, diet costs and affordability, and food insecurity prediction.

EDUCATION

Tufts University, Friedman School of Nutrition Science and Policy *Expected Dec 2022*
PhD, Agriculture, Food, and Environment

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

PRIMARY SKILLS

Spatial and Statistical Analysis: R, Python, ArcGIS, QGIS, Geoda
Epidemiological and Econometric Modeling: R, Python, Stata
Scientific communication and writing

WORK EXPERIENCE

Research Assistant, Feinstein International Center (FIC) *2018-2020*

- *Contribution*: 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*: Study of long-term (100 year) seasonal climate patterns in the Darfur region
  Activity: Taadoud Transition to Development Project
  Project Leads: DFID, FIC
- *Contribution*: Study of short-term (1990-present) seasonal patterns of climatic indicators in the Darfur region and links to farmer-herder violence
  Activity: Twin peaks: seasonality of acute malnutrition, conflict, and environment
  Project Leads: FAO, FIC

Research Assistant, Center for Humanitarian Change *2019*

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

GIS Lab Assistant, Data Lab at Tufts University *2014-2018*

Assisted students and faculty with geospatial projects
Designed and led *Intro to QGIS* and *Mapping Open Data in R* workshops

EcoHealthNet Research Exchange, EcoHealth Alliance *Summer 2017*

Collected data on commercial poultry production and live markets in Burkina Faso, Egypt, Ethiopia, Kenya, Nigeria, and Uganda for the *African Sustainable Livestock 2050* project

Generated network diffusion models from World Bank LSMS and USAID DHS surveys

Identified continental drivers of emerging infectious diseases through geographically weighted principal component analyses and random forest models

Analysis Intern & Consultant, International Water Management Institute *2016-2017*

Mapped impact pathways and identified evidence gaps across projects, themes, and goals

Evaluated target and actual progress across all WLE programs in 2015 and 2016
Compiled practice-wide statistical annexes towards the 2015 and 2016 WLE Annual Reports
Developed quantitative targets for the following year based on statistical annexes

TEACHING ASSISTANTSHIPS

- UEP 294: Spatial Statistics, Tufts University (Spring 2019)
- 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
N. Bruce and Lorry Hanes Endowed Fellowship 2016
United States Geospatial Intelligence Foundation Scholarship 2015
J. Lawrence & Lucille G. Calhoun Scholarship, 2013

PUBLICATIONS

Venkat, A., Masters, W. A., & Naumova, E. N. (2022). Extreme Weather Events Differentially Impact Retail Food Prices: Evidence from Early Warning Systems. Current Developments in Nutrition 6 (Supplement 1), 82-82.

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.