Our research team at Rutgers University School of Social Work is seeking a research assistant for a global poverty project using multimodal analysis. The research assistant is responsible for developing deep learning models using satellite imagery of Congo (ROC) and Zambia and working with team members for multimodal analysis of different data sources. Familiarity with deep learning, computer visioning, and cloud computing is required. An interest in global poverty and sub-Saharan Africa is preferred.

**Project overview**

Our research team is soliciting applications for (a) research assistant(s). The research assistant will work on interdisciplinary research projects that lie in global poverty, development aid policy, and data science.

One of my current research projects is AI for Humanitarian Action. Our team is working on a project in the Republic of the Congo (RoC) and Zambia to identify impoverished and food-insecure communities using satellite and social media data. The project is undertaken in partnership with Microsoft, the World Food Programme, and the Innovations for Poverty Action. The duration of this project is from March 2021 to June/July 2022. Our research team is composed of interdisciplinary researchers with social science, economics, informatics, data and computer science, and geophysics backgrounds. Duties include but are not limited to (1) downloading and collecting satellite imagery (2) developing and testing deep learning models and multimodal approaches and (3) visualizing results.

More information about the projects can be found @ [Measuring Poverty Using Satellite Imagery and Social Media in Congo](https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.jungwoojin.org%2Fscalable-multimodal-approaches-congo&data=04%7C01%7Cwj153%40ssw.rutgers.edu%7Ca4f9e0708a994834697e08d9e20bf536%7Cb92d2b234d35447093ff69aca6632ffe%7C1%7C0%7C637789363271553857%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=58yj45PMzeURSVY5rRK2ykOU7ncRY03EFLkVpC11OCs%3D&reserved=0) and [Zambia](https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.jungwoojin.org%2Fdeveloping-vulnerability-index-zambia&data=04%7C01%7Cwj153%40ssw.rutgers.edu%7Ca4f9e0708a994834697e08d9e20bf536%7Cb92d2b234d35447093ff69aca6632ffe%7C1%7C0%7C637789363271553857%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=C%2F48kcBcigG0xfc1pzBZ96k3tp%2BYdfXwHfND2GZ97ms%3D&reserved=0).

**Credentials**

1. Education: Master’s or Ph.D. in computer science, informatics, or relevant fields
2. Data science skills:
   1. Skills with web-scraping, data representation, modeling/analysis, and visualization
   2. Proficiency in one or more object-oriented programming languages such as Python, Matlab, and LaTex.
   3. Familiarity with cloud computing resources such as Azure and AWS
   4. Preferably familiarity with deep learning (e.g., transfer learning approach) and remote sensing methods using satellite imagery
   5. Knowledge of Stata and R is a plus
   6. Teamwork and communication skills (working with international partners; managing and updating scripts, shared drivers)

**Start date**: Immediately

**Duration**: December 2022 with a possibility of extension

**Hours**: 5-10 hours per week

Please send a resume and cover letter (including your area of interest) with availability and preferred hourly rate to Dr. Woojin Jung at w.jung@rutgers.edu. The application deadline is rolling.