# NISS  POSTDOCTORAL FELLOW / EARLY CAREER RESEARCHER

## DATA SCIENCE or STATISTICS

*The National Institute of Statistical Sciences (NISS) is a research institute focused on bringing advances in statistics to high priority projects with national / international impact.  Early career researchers at NISS have the opportunity to work with researcher leaders to develop innovative statistical solutions to high impact problems and to see the impact as these solutions are implemented.*

### RESEARCH THAT MAKES A DIFFERENCE

NISS researchers make a difference by developing innovative data science technology and statistical modeling methodology for high priority projects at federal statistical agencies. Primary focus a of specific project may use statistical and AI modeling to analyze massive and high dimensional data, or develop models that integrate heterogeneous data types (satellite image, GIS, survey, theoretical or empirical model) or create statistical data visualizations.  NISS Research Associates have received many awards for their contributions in innovation of statistical processes for key national statistics and indicators.

Appointments are for one year with expectation of renewal. Projects are not limited to the examples below.

**Work** with multidisciplinary team to formulate comprehensive technical approaches problem solving.
**Develop**, implement and test statistical/computational technologies for high-dimensional spatial, image, survey and/or administrative record data to create models for estimation and forecasting.
**Conduct** research to meet one of the following challenges:
(1) Develop innovative models that integrate biological development/function (theoretical or empirical) models with historical patterns and current observed data.
(2) Use deep learning technologies to analyze complex data and to create high-dimensional synthetic populations for research purposes that fully incorporate fine structure from large-scale original data.
(3) Extend small-area estimation to time domain to allow interim predictions with model updating based on partial new information.
(4) Create interactive graphics examples for federal data display that includes representation of uncertainty.

### STATISTICAL EXPERTISE

**Preferred Areas:**  Data Science, Statistical modeling, Bayesian inference, Statistical Graphics, Statistical computation, Machine/Deep Learning, Image analysis, High-dimensional data analysis, Small area estimation
**Computing Skills:** R and other useful proficiencies (Java, Python, SQL, Graphics, etc.)

### APPLICANTS

**Education**:  Doctorate in statistics, data science or related discipline expected or received within the last 5 years
**Experience or Interest**: Demonstrated ability to apply statistical theory/methods in substantive area context
**Research**: Demonstrated ability with professional publications and/or presentations
**Other Requirements**:  Commitment to collaborative research, excellent verbal and written communication skills

**The National Institute of Statistical Sciences is an Equal Opportunity/Affirmative Action Employer**

### POSITIONS

**Location**:  Washington, DC (preferred), some remote work possible.
**Salary**:  Based upon qualifications and experience.
**Dates**: Appointment to start any time after 1 August 2021; multiple positions are open until filled.
**Expectations**: Active participation in research with publications in top statistical and domain science journals, also presentations at national professional conferences.

### APPLICATION – SUBMIT VIA EMAIL TO positions@niss.org

**Letter of Interest**:  Full contact information, PhD year, and concise response to research emphases above
**CV**: Educational background (including relevant coursework), research experience, publications
**References**:  Contact information for three references (no letters please)