

#### Data Science Fellow

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#### **Position**

Title

Data Science Fellow

School

Harvard Law School

#### Department/Area

Department of History, Program on Islamic Law (in partnership with Institute for Quantitative Social Science (IQSS), FAS)

### **Position Description**

The Institute for Quantitative Social Science (IQSS) in partnership with Harvard Law School's Program in Islamic Law is seeking a Data Science Fellow to work on SHARIAsource, a Harvard initiative designed to combine historical Islamic sources with data science. The Fellow will be based at IQSS, which offers a rich community of researchers working on data science problems with applications to the social sciences. In collaboration with the Harvard Libraries, which house one of the largest collections of sources in the world, data science approaches will allow us to use quantitative methods to arrive at new insights into unanswered questions.

Successful forays into this new approach to social science and law in this field will require building a corpus of texts, creating tools to render machine-readable data, and building historical text-mining tools. The corpus will be constructed through a combination of machine-learning projects that mine library and online systems for relevant data with faculty guidance in identifying subsets of those texts for digitization. An Arabic OCR tool will build on existing experiments and integrate new tools designed to convert raw image scans into high-accuracy texts using natural language processing and machine learning to recognize irregular text structures, right-to-left texts, and annotations from multiple fonts and scripts. Text-mining algorithms will then be constructed in close collaboration with faculty to create data models that answer important questions in history and law.

The Fellow will work on multiple components of this project. He or she will help assemble and tag the corpus, integrate the texts and tools into a collaborative data platform, and construct algorithms for structuring and mining the data to create classified data models. The ideal candidate will have completed a PhD program in computer science or a related field, and would benefit from spending time working in a university setting on problems at the intersection of technology and academic research.

This is a one-year term appointment. The expected start date is summer 2020, with possibilities for extension based on performance and funding. The Fellow will work closely with the PI, Professor Intisar Rabb (Harvard Law School, Department of History, Program in Islamic Law).

# **Basic Qualifications**

A graduate degree at the Master's level or higher is required before the start date.

Excellent programming and problem-solving skills, as well as a solid background in database design, text analysis, and machine learning.

The Fellow must be self-directed and able to innovatively apply relevant research methods to this use case.

## **Additional Qualifications**

A PhD or equivalent in a relevant field of study is highly preferred.

### **Special Instructions**

TO APPLY: All applications should be submitted online through the data science fellow application webpage (https://harvardlaw.formstack.com/forms/data\_science\_fellowship\_2020\_2021).

Applicants should submit: 1) a CV, 2) an unofficial transcript of terminal degree, and 3) a one-page cover letter describing their experience with data science (including links to portfolios, sites, and/or data repositories) addressed to Professor Intisar Rabb. Application review will begin on April 10, 2020, and applications will continue to be accepted on a rolling basis until the position is filled. Only applicants who submit accordingly will be considered.

## **Contact Information**

Mona Rahmani, Associate Director, Program in Islamic Law (pil@law.harvard.edu).

## **Contact Email**

pil@law.harvard.edu

## **Equal Opportunity Employer**

We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions or any other characteristic protected by law.

**Minimum Number of References Required** 

**Maximum Number of References Allowed** 

# **Supplemental Questions**

Required fields are indicated with an asterisk (\*).

# Applicant Documents Required Documents

**Optional Documents** 

