![NFHA National Fair Housing Alliance logo]

Job Announcement
Data Scientist

The National Fair Housing Alliance (NFHA) has an immediate opening for a Data Scientist to join the Tech Equity team. NFHA is the only national organization dedicated to eliminating housing discrimination and promoting residential integration in America. Founded in 1988, NFHA is a consortium of private, non-profit fair housing organizations dedicated to promoting equal housing, lending, and insurance opportunities through education, outreach, advocacy, training, research, and enforcement. For more information about NFHA, visit www.nationalfairhousing.org.

Position Summary:

The Tech Equity team has a mandate to advance policies, educational resources, tools, and mechanisms for diminishing and ending bias in technologies being used in housing and mortgage lending.

We are looking for a data scientist who enjoys data wrangling, feature engineering, model development, and data storytelling in the context of ethical machine learning. Your primary focus will be in hacking open-source fairness tools in machine learning with the goals of finding their strengths and weaknesses. You will work on classification, regression, and clustering algorithms and will be expected to know how to validate machine learning solutions, and how to monitor them for drifts. You will develop machine learning solutions and develop lesser discriminatory alternatives (LDAs) for them. As an ideal candidate, you must be comfortable working in an agile environment.

Responsibilities:

- Engineering features to find the ones most predictive to outcome of interest
- Selecting features, building, and optimizing classifiers using machine learning techniques
- Extending company's data with third party sources of information when needed
- Enhancing data collection procedures to include information that is relevant for building analytic systems
- Processing, cleansing, and verifying the integrity of data used for analysis
- Testing machine learning solutions for fairness
- Developing machine learning solutions and putting them into production
- Writing parallel code to effectively transform big data
- Using state-of-the-arts explainability techniques to reveal how selected algorithms make their decisions
- Deploying machine learning models to dev and production environments

- Building cloud and web-based machine learning APIs
- Maintaining and upgrading machine learning models following deployment
- Collaborate with member services, enforcement, and other NFHA (National Fair Housing Alliance) departments

Requirements:

- Demonstrated understanding of machine learning techniques and algorithms for handling both discrete and continuous outcomes of interest
- Demonstrated experience with popular Python libraries such as Dask, TensorFlow, PyTorch, Keras, scikit-learn, and Pandas
- Demonstrated experience with popular fairness toolkits such as AI Fairness 360 and Microsoft Fairlearn
- Demonstrated experience with any three of the following programming languages: Python, R, JavaScript, Scala, HTML5, and CSS3
- Experience with data visualization tools such as d3.js and ggplot2
- Proficiency in using query languages such as SQL and Hive
- Experience with python web frameworks such as Flask (preferred) and Django
- Experience with cloud computing platforms such as Microsoft Azure (preferred) and AWS
- Experience with tech stack needed for putting machine learning models in production environments
- Experience with web APIs development (e.g., REST)
- Experience with database technologies (e.g., SQL server, MongoDB)
- Experience with Docker / VM / Automation
- Collaborate with member services, enforcement, and other NFHA departments.
- Adhere to NFHA's policies and procedures
- Commitment to justice, civil rights, and equity

Education and Certification

- BSc, MSc, or PhD in pure mathematics, applied mathematics, physics, computer science, or social sciences such as economics and sociology
- BSc with 6+ years, MSc with 4+ years and PhD with 2+ years of industry experience
- Cloud computing certifications for Microsoft Azure (preferred) or AWS

Application Process:

Salary commensurate with experience with health, vision, dental, and retirement benefit plans provided. NFHA is an equal opportunity employer that values and encourages diversity in its

workforce. Interested applicants should send a resume, sample project (if available), and cover letter to:

Attn: Personnel via email at personnel@nationalfairhousing.org. No telephone calls, please.

The position will remain open until filled.