Data Engineer (12-month contract term limited position)

Job Overview

We are hiring a full-time Data Engineer on a 12-month contract starting in summer 2021 to work with our research group, Opportunity Insights. Our team's mission is to develop scalable policy solutions that will empower families throughout the United States to rise out of poverty and achieve better life outcomes. We pursue this mission primarily by conducting rigorous, scientific research that harnesses the power of "big data" using an interdisciplinary approach.

In response to the COVID-19 crisis, our team has developed the real-time Opportunity Insights Economic Tracker which combines anonymized data from leading private companies to provide a rapid picture of indicators such as employment rates, consumer spending, and job postings across counties, industries, and income groups. Results from this project are being actively used by the media and policymakers to address the effects of COVID-19, and have appeared in the *New York Times*, *Vox*, *NPR*, *Reuters*, and other media outlets.

The Data Engineer will be responsible for the technical operation of the Opportunity Insights Economic Tracker. This person will report to the Principal Investigators, and work closely with the research team, web developers, and other OI staff to support the ongoing operation, continued expansion, and both internal and external usage of the OI Economic Tracker.

As an organization focused on economic mobility, we value having a diverse staff and particularly encourage applications from groups traditionally under-represented in software engineering and economics. Applicants need not have a computer science degree. A successful candidate may come from a variety of backgrounds, and will bring relevant experience in data engineering and an interest in applying those skills to achieve the social mission of Opportunity Insights by sustaining and improving the Opportunity Insights Economic Tracker.

This is a twelve-month contract position, with an ASAP start date.

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.

How to Apply

Please submit a resume/CV and cover letter to mstepner@opportunityinsights.org with the subject line "Data Engineer Application". In your cover letter, please include information about relevant work experience and your interest in this role. We will begin reviewing applications on May 21st.

Key Responsibilities

- Design, implement, and maintain systems to sync data extracts from partner agencies with Opportunity Insights Economic Tracker. These activities will pertain to processes to sync new data series (in collaboration with Principal Investigators and research team, developers, and program manager) as well as processes to regularly update existing series with real time (weekly or more frequent) data extracts.
- Respond to technical issues that may arise in data inflows to and outflows from the OI Economic Tracker.
- Version control inbound data and outbound data, ensuring that internal and external analyses remain replicable as data is revised.
- With oversight from the research team, work with the web developers to troubleshoot and solve errors in data aggregation or visualizations on the Economic Tracker that may connect back to source code, data synchronization, or other issue areas.
- Design and maintain robust server management capacities for the OI Economic Tracker that reflects a structure that is aligned with best practices, maximizes efficiency, and has flexibility to add in expanded data over the long term.
- Implement data automation processes for the OI Economic Tracker, including development and oversight of quality control and validation checks.
- Develop documentation for data processing and management activities.
- As needed, support Principal Investigators and project team in meetings and communication pertaining to data leads and acquisition.
- As time permits, support data processes for other research projects at Opportunity Insights.

Qualifications

Our ideal candidate has the following experience:
- 3+ years work experience in a data engineering or data science role
- Significant experience creating and managing applications with cloud infrastructure, version control and data automation / pipelines
- Experience processing large amounts of structured data, including integrating data from multiple sources.
- Ability to implement reliable ETL (extract, transform, load) processes drawing from APIs, public websites, and server-based data transfers.
- Ability to independently manage complex systems handling multi-terabyte databases.
- Knowledge of best practices for managing multi-terabyte datasets, including creating systems for ongoing access and analysis by team members.

Our current infrastructure relies on AWS, Github Actions and DVC.

Our current code base uses Python, Stata and Shell scripts.

Competencies

- Attention to detail and commitment to error-free work
- Commitment to task ownership and ability to operate under deadlines
- Interest in learning new skills and applying existing skills in new settings
- Commitment to data privacy and data security
- Effective communication with Principal Investigators and other OI staff
- Interest in applying data engineering and data science for social good
- Enthusiasm for using data science to improve research and policymaking
- Ability to perform data analysis and data visualization

Location

- Option to work in Cambridge, Massachusetts or Toronto, Ontario
- Option to work remotely: meetings during U.S. Eastern Time hours