Director of Data Science

Opportunity: Use Your Data Science Skills to Address Problems of Global Poverty

For more than 20 years, Innovations for Poverty Action (IPA) has been fighting global poverty using the power of ingenuity and data. Most often, this has meant opening an office in Peru, Kenya, or the Philippines, or in any of almost two dozen low-income countries and hiring teams of people to fan out and conduct surveys, run randomized experiments, and test innovative programs and policy ideas. The best minds in economics, public health, and other fields have put their ideas to the test, partnering with IPA to implement research and share the evidence strategically with funders and policymakers.

Over these past two decades, IPA has played a central role in the rapid spread of Randomized Controlled Trials (RCTs) to alleviate poverty, an intellectual revolution recognized with the 2019 Nobel Prize in economics.

Now, a new revolution in advanced data analytics is underway and IPA is seeking creative and talented individuals to harness these tools for this important mission. As a member of our team, you will have the chance to:
1. Work on exciting projects: For example, how can satellite imagery data enhance survey-based estimates of household poverty? How can millions of survey para data and metadata records describe the interviews’ duration, pauses between questions, and sound modulations be used for data quality control?

2. Collaborate with diverse experts: IPA’s network includes top academic and non-academic researchers from MIT, Harvard, Yale, Princeton, Chicago, Berkeley, Stanford, Oxford, and dozens of other leading institutions around the world.

3. Access unique data: IPA conducts hundreds of surveys every year, encompassing tens of thousands of households, small enterprises, schools, and hospitals with millions of records, but also uses administrative data, satellite imagery, and sensor data, covering education, health, agriculture, consumption, expenditures, and earnings.

4. Contribute to knowledge: The work is very applied, but we encourage you to publish your research and present at conferences.

5. Make a difference: Our impacts aren’t measured by profits and revenues but by lives saved, women empowered, children educated, and livelihoods restored.
What IPA is doing

IPA is a leader in the use of data to improve the lives of people living in extreme poverty. For 20 years we have been collecting data from households, farms, schools, clinics, and businesses and turning these data into insights about what works to reduce problems of global poverty. We address questions of program effectiveness, implementation, cost, scaling, and targeting that dominate policy discussions. Using the tools of econometrics and statistics, we have achieved a great deal.

However, to maximize our impact, IPA is expanding our capacity to use the most advanced methods in computer science, statistics, and AI. Advances in data science have been transformational in how businesses meet customer demands and increase revenue, in how sports teams decide everything from player value to in-game coaching decisions, and in how political candidates and issues sway voter opinion. Each of these fields – commerce, sports, and politics – have huge amounts of data available. The same is true for the social sector. IPA is at the forefront of gathering and processing these data.

There are many examples of our work and the challenges we face. Over the coming months, these will be documented in a new tech blog that illustrates how data science and software engineering can be harnessed to improve the lives of the poor. This blog will introduce data
scientists who might otherwise enter fields like online retail commerce, sports analytics, or digital marketing to apply their talents in ways that improve the social sector.

Where you can fit in

Many more problems remain unsolved and more remain undefined. For that, we need, creative thinkers who see a problem and can identify the models, tools, data, and algorithms that can bring about a solution.

We take an interdisciplinary approach. IPA’s work has historically been driven by economists, political scientists, and other social scientists using tools of econometrics and statistics. Increasingly, however, we are incorporating insights from computer science, engineering, and mathematics into our work.

Machine learning, AI, and advanced data analytics have given us an incredibly deep and complex box of shiny new tools to work with. What we are looking for right now is not just a team who knows how to use some of these tools, but creative thinkers who can look at a problem and choose the right tool for the right job.

You don’t need to be a development economist or have spent years living and studying in low-income countries, although these are valued, but bring new perspectives and problem-solving mentality to the problems we described above and the ones we have yet to define. IPA will be hiring a director of data science and then a team of data engineers and scientists to work on everything from data pipelines to algorithm development and testing to product development and research. This will require deep knowledge, but also curiosity, fast learning, and an ability to communicate with people with very different areas of expertise and cultural background.
Job Description: (Associate/Senior) Global Director for Data Science and Engineering

IPA is creating a new position for a visionary leader who will build a data science business and operational function to tackle a range of problems related to global poverty itself and the enterprise of collecting and analyzing data to solve these problems. This position is being created to focus and enhance the organization’s expertise in cutting-edge analytics to research global poverty.

Responsibilities:

Thought Leadership

- Articulate a vision for the use of data science and engineering in an international social impact organization focusing on global poverty.

- Lead business line creation and development for data science and engineering at IPA
• Initiate projects using advanced data analytics techniques including machine learning, data automation, and algorithm development.

• Lead the development of new insights, advanced modeling techniques, and data science capabilities.

• Collaborate with IPA departments to define data management operational needs, architecture, and data visualization practices for the organization.

Data Science Capacity Building

• Collaborate with IPA departments and groups to build a function at IPA that delivers data science consulting and products to IPA partners.

• Build appropriate agile operational best practices, work practices, and methods to ensure the execution of data science functions.

• Develop and implement plans for the training, competency, and professional growth of data scientists and engineers.

• Participate in data governance leadership at IPA

• Lead and mentor data science staff.

• Lead a culture of data science rigor and innovation.

Stakeholder Management

• Manage a council of senior data scientists from industry and academia who support IPA's data science strategy.

• Lead engagement with business stakeholders and executives, partnering with them to enhance existing data management methodologies and develop new approaches and methodologies.

• Collaborate with academic partners.
• Communicate findings to key stakeholders through reports and presentations, making any necessary changes.

• Partner with other non-technical departments within the organization, assisting them in understanding how data science can be beneficial.

**Location**

Flexible - Colombia, Mexico, Kenya, or the Philippines desirable; Will consider the U.S. and other/remote locations, with regular travel to one of these hub cities

**Requirements**

• Master’s degree or equivalent in statistics, computer science, economics, mathematics, or related field

• 3+ years of leadership experience in data engineering

• 3+ years of management experience leading a team of data scientists.

• 2+ years of experience with scalable cloud computing for data management

• 3+ years of experience with methodologies for machine learning and advanced statistics such as Bayesian hierarchical modeling.

• 3+ years of experience with data governance structures and operations.

• Ability to communicate orally and in writing with technical and non-technical stakeholders about data analytics.

• Ability to write grant proposals and calculate and articulate return on technology investments.

**Desired**

• PhD or equivalent experience in Statistics, Computer Science, Economics, Psychology,
or Survey Methodology

- Expertise and experience in survey methodology

- Expertise and experience in causal modeling or randomized controlled trials (RCTs)

- Manage a roster of consultants with these skills

**Anticipated closing date**

January 26, 2024

**Application Instructions**

[Click here to apply!](#)