Data Science for Good in Social Impact Research Training Course

Professional Development Training Course Outline

Category	Research and Data Analysis	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today's data-driven world, Data Science for Social Good is transforming how we address pressing societal challenges—ranging from poverty and climate change to public health and educational inequality. Data Science for Good in Social Impact Research Training Course equips participants with essential data science skills tailored specifically for impact-driven research, helping them collect, analyze, and visualize data in ways that influence policy, inform communities, and promote equity. With increasing demand for ethical, inclusive, and action-oriented data practices, learners will explore real-world case studies and learn how to apply statistical modeling, machine learning, and data visualization techniques to drive measurable social change.

This course is ideal for those passionate about using ethical data science to make a tangible difference in the world. Whether working in non-profit sectors, public institutions, research centers, or civic technology spaces, participants will learn how to identify problems, build robust analytical pipelines, communicate findings clearly to non-technical audiences, and implement data-driven solutions that matter. Our practical, interactive approach emphasizes collaboration, transparency, and impact measurement in socially responsible data initiatives.

Programme Curriculum

Data Science for Good in Social Impact Research Training Course

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Course Objectives

1. Understand the fundamentals of data science for social impact.
2. Learn how to conduct ethical and inclusive data collection.
3. Apply machine learning algorithms to real-world social problems.
4. Explore data visualization techniques for storytelling and advocacy.
5. Design and implement evidence-based interventions using data insights.
6. Evaluate policy impact through statistical analysis.
7. Build reproducible and transparent research workflows.
8. Analyze big data sources in the public sector.
9. Collaborate with cross-sector stakeholders in data projects.
10. Learn principles of data equity and algorithmic fairness.
11. Use geospatial analysis for community-level insights.
12. Communicate complex data findings to non-expert audiences.
13. Develop sustainable data science solutions for long-term change.

Target Audience

1. Data scientists working in non-profit or civic sectors
2. Public policy analysts using data to inform decisions
3. Social researchers aiming for measurable impact
4. NGO and nonprofit professionals seeking data literacy
5. Government officials using data for service delivery
6. Graduate students in data science, sociology, or public health
7. Community organizers applying data for local change
8. Tech developers building civic and social tech tools

Course Duration: 5 days

Course Modules

Module 1: Foundations of Data Science for Social Good

- Introduction to data science principles
- Understanding social impact frameworks
- Identifying social problems solvable with data
- Overview of ethical data practices
- Tools for collaborative research (Python, R, Jupyter)
- **Case Study**: Mapping food insecurity in urban areas

Module 2: Ethical and Inclusive Data Practices

- Principles of responsible data collection
- Informed consent and data privacy
- Bias and fairness in data sources
- Equity-focused data metrics

- Inclusive sampling methods
- **Case Study**: Data ethics in COVID-19 contact tracing

Module 3: Data Wrangling and Cleaning for Social Datasets

- Importing and exploring messy data
- Handling missing and biased values
- Preprocessing techniques in Python and R
- Automating data pipelines
- Metadata documentation and version control
- **Case Study**: Cleaning education access data in low-income regions

Module 4: Applied Machine Learning for Impact Projects

- Introduction to supervised and unsupervised learning
- Model selection for social impact tasks
- Interpretability and explainability of models
- Performance metrics aligned with equity goals
- Real-world tools: scikit-learn, TensorFlow
- **Case Study**: Predicting dropout rates in public schools

Module 5: Data Visualization for Advocacy and Communication

- Data storytelling principles
- Interactive visualizations with Plotly and Tableau
- Color theory and accessibility
- Communicating uncertainty
- Visualizations for stakeholder engagement
- **Case Study**: Visualizing racial disparities in healthcare outcomes

Module 6: Policy Analysis and Evidence-Based Decision-Making

- Policy evaluation methods
- Quasi-experimental designs (DiD, RDD)
- Cost-effectiveness and social ROI
- Translating insights into policy briefs
- Collaborating with policymakers
- **Case Study**: Using data to reform urban transportation policy

Module 7: Community Data, GIS, and Participatory Research

- Introduction to geospatial data tools (QGIS, GeoPandas)
- Participatory mapping and data justice
- Local data storytelling techniques
- Engaging underrepresented communities
- Open data platforms and tools
- **Case Study**: Mapping homelessness trends in a metropolitan area

Module 8: Building and Sustaining Data for Good Projects

- Designing scalable impact projects
- Building interdisciplinary teams
- Funding and sustainability strategies
- Measuring and reporting long-term impact
- Creating open-source tools and datasets
- **Case Study**: Scaling a civic tech app for disaster relief

Training Methodology

- Hands-on projects and real-world simulations
- Case-based and problem-centered learning
- Collaborative peer-group workshops
- Expert guest lectures from NGOs and data scientists
- Continuous feedback through mentorship and evaluations

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com