Comprehensive Program on Obesity - Available Positions as of 5/22/17

The NYU Langone Comprehensive Program on Obesity aims to better understand, treat and manage obesity at the population and clinical levels, and strives to prevent and cure the disease within one generation.

Obesity is complex and multi-faceted, with genetic, environmental, social, and medical causes. This complexity may be why we currently have limited evidence-based approaches for the prevention, treatment and management of obesity. To better address obesity, we must develop a more complete understanding of how health behaviors are shaped through integrating cutting edge observations and discoveries from population health, clinical and basic science. We work across four domains: multidisciplinary research, data science, clinical care, and education. Our cross-cutting research program engages researchers across the NYU Langone Medical Center (NYULMC). Drawing on our strengths, we will create a “DataBridge” capable of integrating large amounts of complex data to determine unique causal pathways and strategies for treating and preventing obesity. Key insights will be translated into real, evidence-based obesity prevention, treatment, and management solutions.

For further information, please visit our webpage: http://www.med.nyu.edu/research/obesity.

We are currently seeking to fill the following positions:

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<th>Administration</th>
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<td>Informaticist / DataBridge Director</td>
<td>Data Scientist</td>
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Further details are below. To apply, send resume and cover letter to obesity.initiative@gmail.com with the title of the job you are seeking in the subject line.

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| **Informaticist / DataBridge Director** | **POSITION SUMMARY:** This leadership role will drive the Comprehensive Obesity Program’s push to revolutionize the way data and analytics are utilized to inform obesity research. The individual will oversee core data, informatics, and analytics Program-wide. Early on, this individual will draw on diverse resources to design and build a large-scale repository for integration of diverse data fostering innovative merging of clinical, basic, and population health data (“DataBridge”) and manage DataBridge operations and access.  

**JOB RESPONSIBILITIES**  
1. Develop vision and drive the development, creation, and maintenance of the repository for diverse data integration.  
2. Identify and access institutional data science resources  
3. Proactively address challenges and opportunities in building the data repository  
4. Provide leadership for the data science team  
5. Keep informed of new technologies, developments, methods and ideas, particularly in machine learning and big data, and suggest innovation whenever possible  
6. Experiment and innovate  
7. Think creatively about future needs  

**MINIMUM QUALIFICATIONS**  
- PhD in Data Science, Computer Science, or similar field. Candidate could be a faculty appointment.  
- Deep familiarity with the process of developing a data-driven system.  
- Comfort in designing APIs for large-scale software is a major plus. If you have participated in building open-source software either on github or anywhere else, please let us know.  
- Able to write code well in Python, R, or C++.  
- Familiarity with the large scale computational infrastructure including distributed computing frameworks (for both CPU and GPU) is a plus.  
- Comfort with mathematics and statistics, and familiarity with a few major open source statistical packages. Experience in large scale Bayesian analysis and graphical models, Supervised-, Unsupervised-, or semi-supervised learning, and deep learning is a plus.  
- Experience managing a data science team  
- Ability to think independently and being passionate about solving big problems in the health-care domain.  
- Great communication skills. |

| **Data Scientist** | **POSITION SUMMARY:** Helps to test a “DataBridge,” a large, comprehensive repository for integration of diverse data pertaining to obesity (basic, clinical, and population sciences). Contributes to the creation of a user-friendly infrastructure that integrates and makes usable diverse and disparate data, and provides foundations for integration of advanced machine learning methods. Conducts wide-ranging analyses on these data, interprets and presents outcomes. |

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### JOB RESPONSIBILITIES

1. Cultivate deep familiarity with methodological approaches and data from diverse sources including big data platforms, large administrative databases, small-scale survey data, clinical and basic science, and others, and work to construct a database integrating them together.

2. Test large, comprehensive repository for integration of diverse data (basic, clinical, and population sciences).

3. Continually manage ongoing additions to database. Import and clean raw datasets and create analytic datasets. Develop, manage, and improve databases to track provenance and versioning.

4. Advanced programming

5. Conduct comprehensive statistical analyses according to the study design (e.g., cross-sectional, time series, difference-in-difference, machine learning) and prepare sophisticated reports, charts and tables. Accurately and appropriately interpret and communicate results

6. Monitor, evaluate, and improve data quality. Detect and address issues in data, analytic results, and databases.

7. Develop programs, methodologies, and files for analyzing and presenting data. Clearly communicate processes used and results achieved, and suggest new and alternative approaches.

8. Participate in data-driven decision making with investigators

9. Conduct relevant literature reviews to inform cohort selection, variable definitions, and analytic methods

10. Assist in writing and editing manuscripts for publication.

### MINIMUM QUALIFICATIONS

- Master’s in Data Science, Machine Learning, Computer Science or related area
- One year of data analysis/machine learning experience
- Familiarity with major machine learning models and data mining techniques.
- Able to write code well in Python, R, or C++. Passion about being part of a team that solves big problems in health care.

### PREFERRED QUALIFICATIONS

- Familiarity with electronic health record databases.
- Familiarity with data driven modeling (including gathering and cleaning data, exploratory analysis, implementing models, error analysis, and presenting the findings)
- Extensive experience with Python.
- Comfortable with interfacing between database and python-pandas or other packages.
- Experience with a few machine learning open-source packages (such as sklearn).
- Excellent communication skills.

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