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**Monsanto 2016 Data Science Internships and Co-ops**

**(Predictive Analytics, Risk Analyst and Data Analyst)**

**Request Number: 013WH**

**Description:**

Produce more. Conserve more. Improve lives. That’s Monsanto’s vision for a better world. Achieving this vision demands revolutionizing agriculture through technology and analytics is central to attaining this transformation. We are seeking exceptionally talented individual with a passion for innovation to become an integral part of our Global Analytics Team within the Breeding Organization. The global analytics team is a cutting edge group providing recommendations and solutions to accelerate and optimize Monsanto’s product development. We foster new game-changing ideas to produce sophisticated, intelligent optimization solutions and predictive models. As part of our diverse, highly dynamic group, you will be exposed to highly exciting research challenges and will have ample opportunity to work with interdisciplinary scientists (Mathematicians, Optimization Experts, Engineers, Operations Managers, and Breeders) to foster your career growth and development while delivering next-generation analytical solutions.

**Predictive Analytics and Risk Analyst paid internships are three (3) month assignments.**

*Only students that intend to return to academic studies the following fall semester are eligible to enroll in this program.*

**Predictive Analytics, Risk Analyst and Data Analyst paid Co-ops requires a six (6) month commitment.**

*Students sit out a full academic semester (June-December 2016).  Please apply only if you are certain of your willingness and ability to commit to the full duration of the assignment.*

**Predictive Analytics Internships and Co-ops.**

Responsibilities include the development of research strategies for discovery projects in the Breeding platforms. The successful candidate will use the latest innovations in Predictive Analytics, Geospatial Analytics or Operations Research to propose and develop solutions that accommodate emerging trends in data quantity and quality. Responsibilities also include design and testing of algorithms and conducting prototyping to evaluate possible scenarios leveraging computational and statistical techniques for the development of novel approaches for high-throughput data analyses.

**Required Skills:**

* Pursuing PhD in Computer Science, Bioinformatics, Computational Biology, Mathematics, Statistics or Engineering.
* Proficiency in Machine learning concepts (data transformations, feature engineering, etc.) and algorithms (Ensembles, Deep Learning, SVM, etc.)
* Experience analyzing and presenting complex data and proven problem solving abilities, including experience with statistical and mathematical programming packages (R or Matlab)
* Experience working with agricultural/biological scientific data is highly desired
* Background in big data technologies including Apache Hadoop / Spark is highly desirable
* Drive for translating business problems into research initiatives that deliver business value
* Strong organizational, interpersonal, and written communication skills
* Ability to work in a matrix environment, influencing people at varying levels of responsibility.

**Risk Analyst Internship and Co-ops.**

Responsibilities include the development of research strategies for discovery projects in plant breeding.

The successful candidate will perform quantitative research and computational analysis to support the risk management process. In addition, you will utilize advanced analytics and Monte Carlo modeling to assess future risk and opportunities. This includes building and validating models for measuring and forecasting risk, assessing model accuracy and conducting stress testing, and performing sensitivity analysis and scenario analysis.

**Required Skills:**

* Pursuing PhD in Financial Mathematics, Statistics, Economics, or Actuarial Science or a closely related field.
* Experience using various optimization techniques like linear programming, quadratic programming and mixed-integer programming.
* Experience with stochastic modeling, forecasting and Monte-Carlo simulation techniques
* Expertise in queuing theory, and game theory is desirable
* Experience using optimization packages such as Simul8, CPLEX and CVX etc is desirable
* Drive for translating business problems into research initiatives that deliver business value
* Strong organizational, interpersonal, and written communication skills
* Ability to work in a matrix environment, influencing people at varying levels of responsibility.

**Data Analyst Breeding Co-op.**

Monsanto is looking for experienced Data Analyst with strong Statistical background to join the Global Environment & Modeling Team. This team works with statisticians and domain scientists across various disciplines, leveraging agricultural statistics, satellite images, environmental modeling, and more.

Responsibilities include driving methodology development for complex statistical problems related to spatial analysis, agriculture, and machine learning. Candidates will perform statistical or other simulation modeling to test scientific hypotheses, evaluate the limitations of existing data sources and provide concrete recommendations for data needs, engage with diverse research groups to understand their models, products and data needs and provide strategic advice on their research roadmaps and communicate results to stakeholders in various parts of the organization, including quantitative groups, business strategy groups and product managers.

**Required Skills;**

* Pursuing Ph.D. in Statistics, Machine Learning, or in Agronomy with strong background in Statistics
* Experience developing methodology for solving complex applied problems
* Advanced experience with statistical software environments such as R or Python
* Excitement to learn new topics, develop new skills and use new tools
* Experience with application of statistics to environmental or agricultural problems is a plus.\

The successful candidates will have the opportunity to work collaboratively with interdisciplinary scientists internal and external to Monsanto, organize challenging problems, develop new solutions, and work with business and development teams to ensure these solutions deliver value.

Daily transportation to the Monsanto site is required and will be the responsibility of the student.

**Location:** All Predictive Analytics, Risk Analyst and Data Analyst Internships and Co-ops.

* Chesterfield, MO

**Apply at:** [**www.monsanto.com/careers**](http://www.monsanto.com/careers) **Requisition number: 013WH**