UNIVERSITY OF MIAMI

INSTITUTE for DATA SCIENCE & COMPUTING



Deep Analytics for Massive Data:

Roadmap Towards a Transformative Knowledge Grammar Using AI, Machine Learning, and Data Science

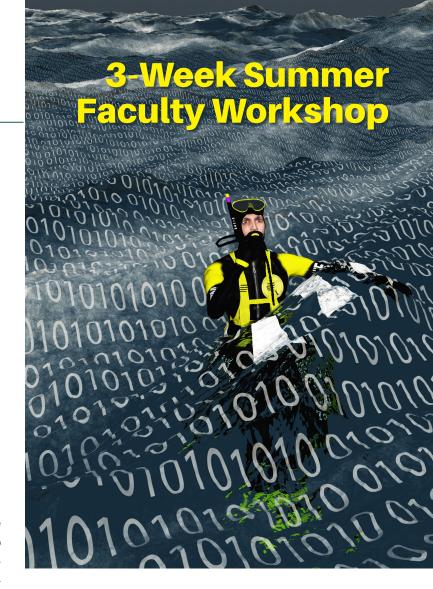
Monday 6/7 - Friday 6/25/2021 Weekdays 9:00 AM - 12:00 Noon

IDSC is offering a 3-week online workshop for UM faculty not currently using data science or machine learning (ML) for research/teaching. This workshop provides a comprehensive but accessible introduction to data science and ML, introducing relevant concepts and tools along with major modules.

Minimal Prerequisites: College math and some experience in computing or IT are adequate.

The workshop uses cloud data and software resources (IBM cloud) in deploying applications. The cloud resources offer broad and complete coverage of topics with hands-on experience. Some initial programming language training is delivered to bring up the workshop participants to speed. At the conclusion, participants will acquire skills and tools in ML and data science for academic research, industrial development, or advanced research.

Space is limited to 15 participants.



Topics include:

- ► The Landscape of the Fields
- Probability, Information, Uncertainty, Statistics, and Inference
- Linear Algebra, Vector Calculation, and Optimization
- ▶ Data Science/Machine Learning Methodologies
- Databases and Structured Query Languages
- Cloud Computing and Cloud Databases
- Unsupervised and Supervised Learning
- ► Natural Language Processing
- ▶ Computer Vision
- ► Time-Series Forecasting

Application Process: Interested faculty should submit an application form that includes a short paragraph describing how you plan to use the experience from the workshop in your research.

305.243.4962 | idsc@miami.edu



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