Knowledge of data analytics is important for many systems engineers, project managers, and project leads. Students successfully completing this course will be able to:

- Compare and contrast algorithms and processes used for intelligent systems
- Systematically apply intelligent learning to empirical data
- Describe the advantages of system approaches to machine learning and artificial intelligence problems.
- Apply the tools of data analysts, including statistical and software tools
- Analyze open-ended data analytic challenges in large systems.

Topics include machine learning for analytics; systems engineering and meta-algorithms; prototyping software for getting to know your data—R, Python, Arduino; applications; 1st, 2nd, and 3rd Order meta-algorithms for future patterns for intelligent systems.

INSTRUCTOR BIO

Dr. Simske is a CSU Professor, an HP Fellow and a previous Director in HP Labs. As of November 2017, he is the author of more than 400 publications and more than 160 US patents (many more worldwide). He is an IS&T Fellow and an honorary professor at the University of Nottingham. Dr. Simske was a member of the World Economic Forum Global Agenda Councils from 2010-2016, including Illicit Trade, Illicit Economy and the Future of Electronics. At HP, he directed teams in research on 3D printing, education, life sciences, sensing, authentication, packaging, analytics, imaging and manufacturing. His book “Meta-Algorithmics” addresses intelligent systems. He is currently co-authoring books on Industrial Inkjet Printing (Wiley), Fundamentals and Applications of Hardcopy Communication (Springer), and Meta-Analytics (Elsevier). He has degrees/Post-Docs in biomedical, electrical and aerospace engineering.