4-20-2017

A pilot "big data" education module curriculum for engineering graduate education: Development and implementation

Megan R. Sapp Nelson
Purdue University, msn@purdue.edu

Line C. Pouchard
Purdue University

Protocol proposal
Megan Sapp Nelson
Line Pouchard

Leaning objectives 1: what students should comprehend and practice
Learning objectives 2: what could be boosted in the students. Concepts or skills not known across the board
Learning Objective 3: new areas identified for possible training

A: all
GS: Graduate students

Learning objective	Description	Date	Initials	Target
1)Learning objectives that your students indicated that they comprehend				
				A
Using Github for versioning, sharing and re-use				A
Command line use				A
Metadata				A
Relational databases and MySQL				A
Visualization				GS
2)Learning objectives indicated for more instruction and training				
Date-centered naming conventions				A
Tools (Python, Bash, C++, IDEs)				A
Modular coding				A
Paper notebook				A
Human-readable coding, variable naming, camel case				A
Quality control/QA				A
Cloud tools				A
3) Learning objectives for new instruction and training				
Intellectual property				A
Peer-review of coding exercises				A
Geographically dispersed back-ups for all data (NPS)and software				A
Implications of data size				
GPUs				GS
Data life cycle vs Software life cycle				GS
Project management skills				GS
How to write a research paper				GS