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programs

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Disclaimer: The information provided and opinions expressed in this presentation do not  
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# Background



- AFIT is the Air Force's graduate school of engineering and management as well as it's institution for technical professional continuing education.
- The graduate school consists of 6 departments
  - Web-based Certificate in Data Analytics
  - Web-based Masters in Data Analytics
  - In-resident M.S in Data Science
  - In-resident PhD in Data Science
- There are three professional continuing education schools
  - School of Systems and Logistics – Acquisition focused short courses, also has a data analytics initiative
  - School of Strategic Force Studies – includes nuclear and cyber
  - Civil Engineer School
- Personal Background: B.S. USMA West Point, MSs RPI, PhD Boston U.; U.S. Army retired operations research analyst; taught at West Point and, for the last 10 years, AFIT



Aeronautics  
&  
Astronautics



Electrical  
&  
Computer  
Engineering



Engineering  
Physics



Mathematics  
&  
Statistics  
(supports all programs)



Operational  
Sciences



Systems  
Engineering  
&  
Management





# Data Science/Analytics Professional Continuing Education & Graduate Education



	PCE	DATA ANALYTICS CERTIFICATE	MASTERS OF DATA ANALYTICS	DATA SCIENCE CERTIFICATE	MS IN DATA SCIENCE	PHD IN DATA SCIENCE
MODALITY	On-Site Short Courses Est # = 100s / yr	Distance Learning (DL) Est # = 200 / yr	Distance Learning (DL) Est # = 60 / yr	In-Residence (add-on certificate) Est # = 20 / yr	In-Residence Est # = 30 / yr	In-Residence Est # = 5 / yr
COURSES	Each <= 1 Week 3 developed 8 in development	20 Credit Hours	48 Credit Hours	16 Credit Hours	48 Credit Hours	72 Credit Hours
MIN REQTS	Previous course if applicable	Algebra (same as ASAM program)	Algebra (same as ASAM program)	Calculus	Calculus	Calculus
TARGET AUDIENCE	Data Analysts, Architects & Engineers	Practitioners	Practitioners	Scientist & Engineers (S&E)	S&E: Data Scientists	S&E: Data Scientists
CURRENTLY BEING OFFERED	Yes, Partial	Yes	Additional resources need to be identified	Yes	Additional resources need to be identified	Additional resources need to be identified

AFIT POCs: Dr. Darryl Ahner (darryl.ahner@afit.edu) or Lt Col Chris Randall (christian.randall@afit.edu)

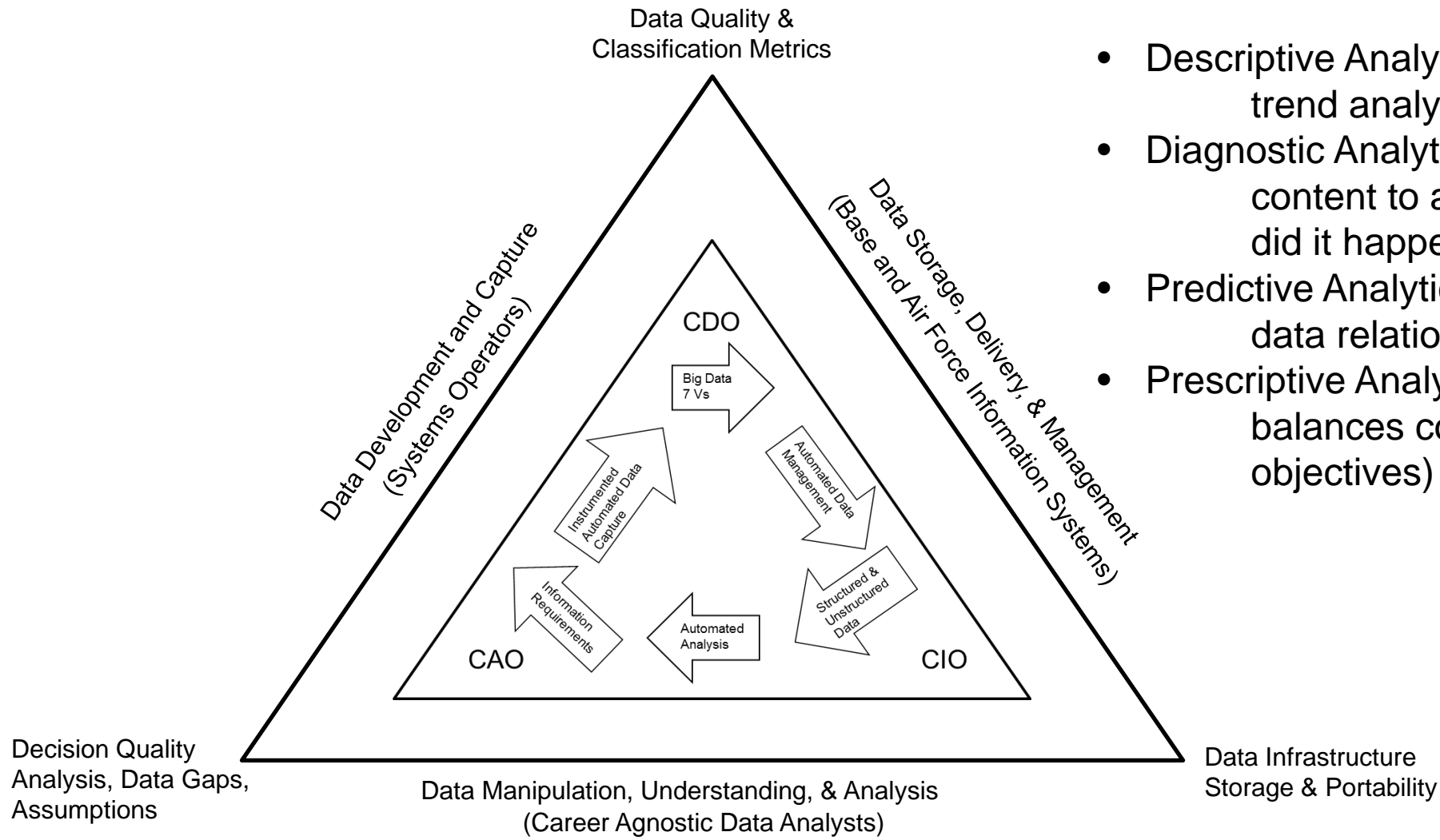
AFIT Education Excellence:

Inspiration → Imagination → Innovation → Invention → Implementation → Impact





# Air Force Data Analytics Ecosystem (User Community)



- Descriptive Analytics (visualization, trend analysis, summary statistics)
- Diagnostic Analytics (examines data or content to answer the question “Why did it happen?”)
- Predictive Analytics (pattern recognition, data relationships, forecasting)
- Prescriptive Analytics (informs decisions, balances constraints, optimizes objectives)







# Analytics Inter-relationship of Disciplines

