CONTENT ANALYSIS OF 2 & 4 YEAR DATA SCIENCE PROGRAMS IN THE U.S

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Research Objective, Questions and Method

- **Goal**:
  - Evaluate Data Science Programs in the U.S. by identifying similarities and differences in course offering and program structure.
- **Research Questions:**
  - What are the characteristics of Data Science programs?
  - What are the common core courses and competencies?
- **Method:**
  - Analyzed: institution website, department website and academic course catalog.
  - Crawled – 171 undergraduate Data Science programs, omitted 35 and analyzed a total of 136 programs.

Data Analysis

- Content Analysis
- Cohen's Kappa - value calculated to measure inter-coder reliability (department/school name clusters = .82 and major clusters = .76)
- Excel Pivot tables - feature used to analyze the data and Excel graph feature used to visualize the results
- Program profile analysis (RQ1) – For the 136 colleges identified, analyzed college or university information, major and department information, credit information, instruction modality information, and geographic information.
- Comparative Analysis (RQ2) – For the 136 colleges identified analyzed their programs for ACM 2021 Data Science competencies.

Results, Conclusion and Future Direction

- **Results**:
  - Data Science undergraduate programs are thriving & increasing along with industry demand
  - These programs are offered in both private and public colleges across the U.S.
  - They vary in core credits and degrees
  - They have implemented the ACM 2021 Data Science competencies across all programs regardless of major or departments
- **Conclusion:**
  - Those interested in Data Science should pursue a Bachelor of Science (BS) degree and major in data science , data analytics or math and statistics
- **Future Direction:**
  - Curriculum details and job placement
  - College ranking and program offerings
  - Undergraduate and graduate program offerings