NSF-EHR Programs that will fund Big Data Activities
John C Cherniavsky, jchernia@nsf.gov, Division of Research on Learning

Building Community and Capacity for Data Intensive Research
https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505161

Smart and Connected Communities http://www.nsf.gov/pubs/2015/nsf15120/nsf15120.jsp

Cyberlearning and Future Learning Technologies
http://www.nsf.gov/pubs/2014/nsf14526/nsf14526.htm

Improving Undergraduate STEM Education
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505082

EHR Core Research http://www.nsf.gov/div/index.jsp?div=DRL

Advancing Informal STEM learning
http://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=504793&ods_key=nsf15593

Discovery Research PreK-12 (DRK-12) http://www.nsf.gov/pubs/2015/nsf15592/nsf15592.htm

NSF Research Traineeship Program http://www.nsf.gov/pubs/2016/nsf16503/nsf16503.htm

Big Data in Education– Some sample possibilities

- Research using large federated traditional data sets (millions of students) and interventions to effectively use HLM to infer effects on groups or clusters of groups
- Research using interactive data and sensor data collected from learning environments to begin to address affect and/or physiological effects on learning
- Research using exogenous data such as socioeconomic data on poverty, criminal records, financial records, family records, etc. and combine with other education data to better model factors outside of schools and learning environments that affect learning
- Research addressing questions that arise in using, in particular, large education data sets for research (FERPA, IRBs related to privacy, informed consent, data use and ownership, etc.)
- Developing infrastructure (software and data) for sharing large education data sets