



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

Data@Carolina

Call for Course Development Grant Proposals

Jay Aikat, Computer Science and RENCI
Kevin Jeffay, Chair, Computer Science
Stan Ahalt, Director, RENCI
Thomas Carsey, Director, Odum Institute



The University of North Carolina
Department of
Computer Science



UNC
THE ODUM INSTITUTE



The Genesis of Data@Carolina

- **August 2014:** Data Science Planning Meeting called by Steve Matson, Judith Cone, and Ron Strauss
- **April 2015:** The Data@Carolina Working Group submitted a proposal to Provost Jim Dean, for:
 - Initial funds to launch graduate and undergraduate efforts in DataX
- **May 2015:** We presented our proposal and ideas at the Deans' Council meeting





Update

- **September 2015:** Data@Carolina workshop held at RENCI; over 50 participants from 30 different units on campus
- **October 2015:** The Data@Carolina Core Group (Kevin, Stan, Tom, Jay) met with Provost Jim Dean to discuss the submitted proposal
- **December 2015:** Provost Jim Dean announced initial funding for the Data@Carolina initiative





Who is Data@Carolina

- **Anybody who wants to be involved, but coordinated by:**
 - Jay Aikat, Computer Science and RENCI
 - Kevin Jeffay, Chair of Computer Science
 - Stan Ahalt, Dir, RENCI
 - Tom Carsey, Dir, Odum Institute for Research in Social Science





Next Steps

- Launch the **Professional Science Masters (PSM)** and a **Graduate Certificate** in Data Science,
- Create **curriculum development** opportunities for faculty across campus to “datafy” existing courses or create new courses to foster data literacy
 - Course development grants
 - Hiring a Data Scientist in Odum
- Formulate a longer-term **grand vision** for Data@Carolina in research, education and outreach





Curriculum grants

- data.web.unc.edu/proposals (please visit for important details)
- Undergraduate and graduate level courses
- Courses offered in 2016-17
- Develop content that can be shared – e.g. datasets, tools, modules





Curriculum grants

- Deadline for application: April 1, 2016
- All faculty are eligible across campus
- Budgets capped at \$10K per award; target means of \$5K(ish)
- Active and substantial engagement with data in the classroom
- Encouraging creativity in course





Curriculum grants

- Pre-submission information workshop
 - Mar 2, 2:00–4:00 PM, Davis Library Research Hub
- Post-selection workshop in April for course grant recipients
- Help in developing courses through summer and 2016-17 year
- Follow-up workshop in Spring 2017





Curriculum grants

- Current CV
- Three-page proposal (max)
- One-page budget and justification
- Support letter from Department Chair/Dean
- Email packet





Data@Carolina Curriculum grants

data.web.unc.edu/proposals





Next Steps – hiring

- Full-time data scientist at the Odum Institute
 - facilitate data intensive research and proposals,
 - contribute to the development and offering of data science training workshops, and
 - support faculty members seeking to develop data related courses or infuse more data science into existing courses
- The following may be part-time at first, until we hire full-time personnel:
 - Program Coordinator for graduate programs
 - Program Coordinator for undergraduate initiatives
 - Program Director





Data Science Graduate Programs

- Highly Interdisciplinary
- Cross-cutting areas form the core of the discipline
 - Computer Science (COMP)
 - Information Science (SILS)
 - Statistics and Operations Research (STOR)
 - Mathematics (MATH)
- Domain Sciences provide the research challenges that drive the discipline
 - Traditional sciences (biology, environmental science, ...)
 - Health (medicine, pharmacy, nursing, public health, ...)
 - Social Science (law, sociology, public policy, ...)
 - Business (banking, insurance, financial services, ...)





PSM Program - overview

- 12-15 month, full-time, accelerated program
- Modular courses
 - Not tied to the semester model of course delivery
- Team-based practicum
 - Internship
- Likely some plan/facility for remediation
 - Encourage intellectual and professional diversity via multiple entry points
- Graduate School mandated professional development courses
 - (Courses delivered by the Graduate School)





Graduate Certificate Program - overview

- Graduate students enrolled in a research-intensive (PhD seeking) degree program in a domain science seeking training in data science
- Example domains:
 - Biology, Chemistry, Physics, Astronomy, Env. Science, ...
 - Political Science, Sociology, Psychology, ...
 - Public Health, Pharmacy, Nursing, Medicine, ...
 - Physics / Astronomy
- Resulting in...
 - **Graduate Certificate in Data Science**





Undergraduate Initiatives

- Create **curriculum development** opportunities for faculty across campus to “datafy” existing courses or create new courses to foster data literacy
- Explore options for minor or major especially as the College reviews curriculum plans
- **Goal:** make Carolina students (and faculty) data-literate, regardless of the field / department / unit





Immediate Next Steps

- Course development grants:
 1. set up a Dataverse for collecting and sharing data
 2. create webpage for announcement with list of resources
 3. administer the application process
 4. hold a kickoff meeting in April, including a discussion of available resources





Immediate Next Steps (contd.)

- Course development grants:
 5. set up workshops and consulting for grantees in summer and fall
 6. monitor courses, collect student and faculty evaluation information
 7. hold a Spring 2017 reunion workshop to debrief
 8. plan for second competition in 2017 pending available funds





Immediate Next Steps (contd.)

- Full-time data scientist at the Odum Institute
 - facilitate data intensive research and proposals,
 - contribute to the development and offering of data science training workshops, and
 - support faculty members seeking to develop data related courses or infuse more data science into existing courses





Data@Carolina Update

- Curriculum grants for data-related course development
- Professional Science Masters (PSM) and graduate certificate in Data Science
- Research collaborations and long-term vision
- Provost's office has allocated initial funding for these efforts

