Big Data Training for Translational Omics Research

We are pleased to announce the third online course in big data training for biomedical researchers. This online course will provide biomedical researchers inexperienced in biomedical big data science with entry level training in big data science. It will also use problem-based activities to build familiarity and basic competency with established tools and publicly available resources. These activities will be complemented by formal lectures. The course is open to faculty, postdoctoral researchers, and advanced graduate students.

The educational goals of the Online Course are to:

- Raise participant awareness and knowledge of the value of big data in biomedical research
- Build basic competency of participants in the use of established tools and public databases
- Give participant a vocabulary for effective communication with big data science experts

Online Course Topics include:

- Using public databases and tools
- Differential gene expression analysis using microarrays and RNA-seq data
- Use of Next Generation Sequencing data for RNA-seq, ChIP-seq, and epigenetics.
- Visualization and functional assessment of data
- Use of "omics" data for Biomarker discovery
- Integrating multiple types of omics data
- Building an understanding of GWAS and how genetic variation influences biology and disease

Prerequisites for the Online Course:

- A semester-long statistics course or equivalent
- Demonstration that you are actively working in biomedical research
- Graduate students must have passed their preliminary/admission to candidacy exam

We will host 40 participants for the on-line course. ***There is no cost for tuition!*** In addition, individuals from underrepresented groups are encouraged to apply.

Application deadline is Monday, January 28th, 2019 Apply online at:

http://www.stat.purdue.edu/bigtap/online/apply.html

To apply you'll need:

- A **NIH CV** with a "personal statement" that includes:
  o 5 sentences summarizing your research area
  o The reason you want to learn more about biomedical big data analysis,
  o A sentence describing planned/completed projects requiring big data analysis
  o A brief statement for how you would benefit from participating in the course.
- A recommendation letter from your advisor for graduate students and post-docs
- **Questions and contact:** bigtap@purdue.edu http://www.stat.purdue.edu/bigtap/online/FAQs.html