

DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE  
COLLEGE OF ENGINEERING AND APPLIED SCIENCE

SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATE WOMEN

APPLICATION DEADLINE: 03/01/2018

PROJECT TITLE: Mining Spatio-Temporal Data with Applications in Health and Earth Sciences

Gowtham Atluri  
Dept. of EECS  
College of Engineering and Applied  
Sciences  
829 Rhodes Hall  
Cincinnati, OH 45221-0030  
atlurigm@ucmail.uc.edu  
Phone: 513-556-3196

**Project Description**

My lab explores computational approaches for data science with applications in mining neuroimaging data, wearable sensor data, and climate science data. Key characteristics of data sets in these applications include high dimensionality, small sample sizes, spatial autocorrelation and temporal autocorrelation. The WISE project will include implementation of existing as well as new data mining algorithms in languages such as Matlab and Julia. In addition to a good working experience with these languages, applicants should be able to determine the computational complexity of algorithms. Data visualization will also be a significant part of this project. Applicants who are familiar with data mining problems such as clustering, classification, and pattern mining will be preferred. Successful candidate(s) will be using computing resources from the Ohio Supercomputer Center.