

# CS107 Classroom Student Assessment Kit

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# What will we do?

- Build an efficient attendance gathering system
  - Use RFID scanning to “check-in” students to the class
  - Upload data to long-term storage
  - Visualize attendance data in a way that allows Professor Kumar to easily track the attendance of individuals and the class as a whole
- Build a participation tracking system
  - Crawl Piazza for questions and answers from students
  - Assign each post a score based on the content of the text
  - Use students’ combined scores to give them percent based participation average
  - Visualize participation of individuals and class as a whole

# Why are we doing this?

Professor Kumar has repeatedly asked for a solution to this age-old problem. Using this practical tool, he and other instructors will be able to easily track attendance and participation without the onerous tasks of printing, passing, and collecting sign in sheets or keeping track of class participation.

The data collection and organization techniques necessary to complete the project also make good use of the data structures we've learned in class.

# Timeline

- Week 1
  - Source materials for RFID scanning
  - Test feasibility of RFID scanning
  - Research data visualization tools
  - Research applicable metrics
  - Test Piazza data extraction
- Week 2
  - Program data structures for the classroom kit
  - Configure data visualization environment
  - Configure database
- Week 3
  - Build UI
  - Test
  - Debug
  - Write final report

# Risks

- None of us has ever worked with hardware before, but we're going to do it anyway.
  - Throughout these 3 weeks, we will be learning these new techniques with the help of VCAM resources as well as internet tutorials.
- Data extraction from Piazza could pose issues
  - Piazza doesn't have a public API that we can pull data from, so we will need to perform front-end scraping. We have to figure out how exactly we can do this.