

# Capstone project ideas

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## 1 Proposals

### 1.1 FDA inspection results

Analyze previous inspection results for insights that can be marketed to other companies with upcoming inspections, or to predict organizations that are in jeopardy of failing future inspections. FDA inspections are published by the FDA (<http://www.fda.gov/ICECI/Inspections/ucm>) and this data would be analyzed to determine features (or combinations of features) that drive successful inspections. Delivery of this capstone project would be through ipynb on github and a presentation.

### 1.2 USDA nutrient database

Optimize foods to be used for endurance hiking (like Appalachian or Pacific Crest Trails). Analysis could be used by hikers as well as companies supporting long-distance hiking or other sports (and possibly expanded to support other nutrition goal, such as school lunch programs). The USDA Nutrition Database provides nutrition data for many foods, and could be coupled with recipes or ingredient lists from energy foods to predict the most useful or successful products or nutrient combinations. Delivery of this capstone project would be through ipynb on github and a presentation.

### 1.3 Organizational network optimization

Develop visualization for complex programs and quantify individual relationshipsinteractions by value as determined by email content. The purpose would be to help optimize the application of resources (time or money) to the most beneficial relationships. The ENRON dataset could potentially be used for this analysis.

## 2 Other ideas

### 2.1 Email optimization

Prioritize emails requiring action based on organizational network optimization

## **2.2 Wunderground analysis**

Analyze wunderground results to identify which stations provide best indication of microclimate at individual location

## **2.3 IMDB**

IMDB: look at differences in types of movies and quality wrt number of movies they are in (and lead/supporting roles).

When is the right time to retire for actors/actresses?