# Info 206: Software Prototyping for Data Science and Information Management

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## The Problem

Financial trading requires rational decision making. However, it can be difficult to maintain composure while markets are tanking, even if only temporarily. As markets that are emerging and unregulated, cryptocurrency markets are inherently volatile. For our project, we seek to provide real-time, relevant information to cryptocurrency traders as a broader context, in order to help relieve rash emotional responses.

## Project Overview

We will use the Coin Market Cap API to evaluate historical data of various cryptocurrency prices. The data will be analyzed to benefit end users in two potential ways:

1. We are interested in building a small front-end website using Flask, hosted on AWS. On the site, the user will enter their phone number and notification preferences into a simple form. We intend to store this info using the Python tinyDB but will explore other storage options as well.

   Once collected, the user will be notified when price falls above/below a certain point using the Twilio Rest API. We will build a notification system that will send a text message to the user notifying them of the occurrence of the price change, as well as the amount of the change. The idea is to keep users informed of price movements so they can effectively act on their trading strategy in a timely manner.

2. Should time permit, we also hope to present data from the API interactively using the Seaborn Python visualization library. We can use simple filters on the data including date ranges, sorting by type of cryptocoin, or percent change in price.

## Style Guide

We intend to adhere to PEP8 style guidelines for our repository. As a few examples, we we will be naming variables using camel case as naming conventions, (e.g. thisIsAVariable). We will also be using tabs to indent our code.