

## Overview/Description

In this class, we'll discuss educational disparities in the United States through multiple lenses. Specifically, we'll read and discuss *Flowers for Algernon* by Daniel Keyes and other articles and works, discussing the broader powers and burdens of education as well as the history of education in the US. For the other part of the course, we'll examine a dataset that attempts to determine how family income affects educational opportunity. To examine this data, we'll be using a few different Python packages that help us analyze large datasets. We'll also get to create our own graphs to visualize the data! We're excited to have you :)!

## Instructors

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## Course Materials

- *Flowers for Algernon* by Daniel Keyes (we will only read the short story, but you are welcome to read the book too!)
- The rest of the readings are listed below!

## Prerequisites

- A very basic understanding of Python and CS principles
- Please read the listed readings below before each class!

## Tentative Schedule

- Lesson 1: *What is the purpose of education? Who does it benefit? Who does it harm? Who is it for? Are there limits?*
  - If I Were a Black Kid – <https://www.theatlantic.com/national/archive/2013/06/if-i-were-a-black-kid/276655/> [10 minutes]
  - The Purpose of Education—According to Students <https://www.theatlantic.com/education/archive/2017/10/the-purpose-of-education-according-to-students/541602/>
  - *Flowers for Algernon*, Daniel Keyes
    - <https://www.sdfo.org/gj/stories/flowersforalgernon.pdf>
- Lesson 2:
  - Brief History of U.S. Education
  - *How do we go about fixing the education system? Is it even possible?*
  - Miss Buchanan's Period of Adjustment – Malcolm Gladwell (you can read the transcript or listen to the podcast)

## Knowledge is Power: Examining Educational Disparities in the United States

<https://www.simonsays.ai/transcripts/malcolm-gladwells-revisionist-history-miss-buchanans-period-of-adjustment>

- Good School, Rich School; Bad School, Poor School –  
<https://www.theatlantic.com/business/archive/2016/08/property-taxes-and-unequal-schools/497333/>
  - Student Opinions/Proposals?
  - Introduction to Python (& setup on Google Colab)
  - Discuss dataset & ask students to guess how family income affects children's college chances
    - Ask students to guess
    - Go through dataset together
  - Introduce Pandas & Matplotlib
    - Simple functions in Pandas
    - Creating a simple graph with Matplotlib
  - Questions!
- Lesson 3:
    - Work through an example together (Percentile Income vs Ivy League Attendance)
    - Create a graph that answers the original question
      - Create a new column together
      - Give students some time to graph
    - Discuss the correlation that we see & how to fit a model
    - Implementing a model & determining accuracy
    - Discuss what this model means
    - Questions!