

# Welcome!

CMPSC 105 – Data Exploration

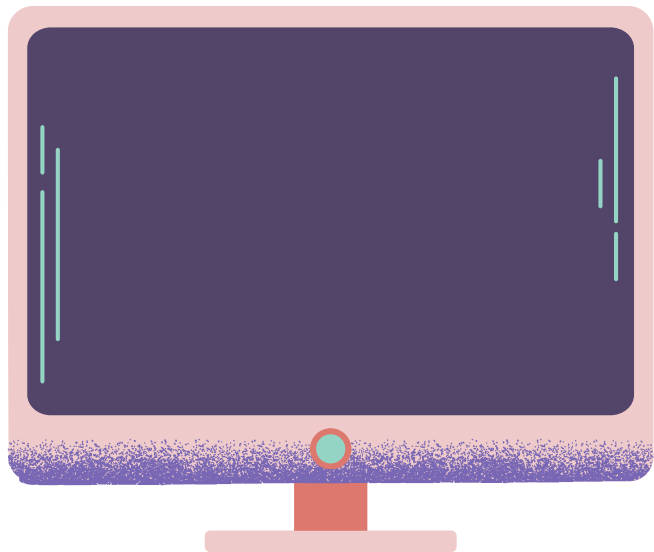


ALLEGHENY COLLEGE

# Agenda for today

- Introductions: Getting to know me
- Course overview and expectations
- Class Survey: Getting to know you

# The basics



Instructor: Hang Zhao

Office: Quigley Hall 208 & Alden Hall 105

Email: hzhao@allegheny.edu

Office hours:

**T/Th** 11:00am–12:30pm. Location: Alden Hall 105

**w** 10:00am–1:00pm. Location: Virtual

**By appointment** at <https://calendar.app.google/PD6Ku9PSCZ716K5D7>

# A little about me



## Visiting Assistant Professor

- Dep of Computer and Information Science
- 

## Education:

- **University of Connecticut**
- Doctor of Philosophy, Agricultural and Resource Economics
- **Boston University**
- Master of Science in Actuarial Science
- **University of Colorado**
- Bachelor of Arts, Major in Economics, Minor in Mathematics

## Research Interests:

- Drug policies, the well-being of older adults, nutrition and health outcomes



LOADING...

# Resume



You Have A  
New Messages!

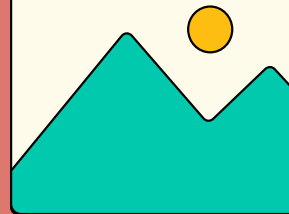
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READ



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OK



OK



LOADING...

## Research Statement



You Have A  
New Messages!

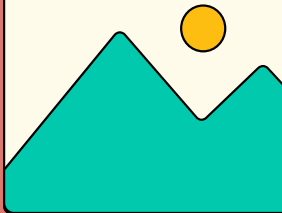
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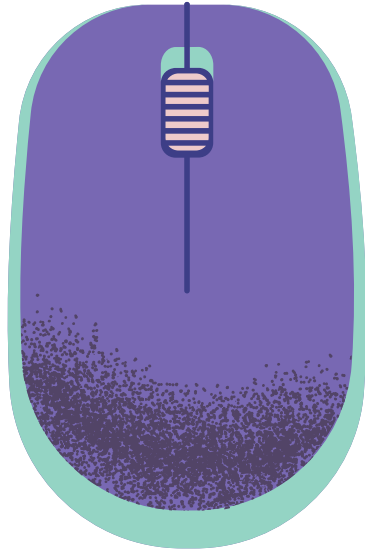


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OK



OK



# Course overview and expectations

# What is this course about?

This course is for anyone interested in becoming familiar with:

- data display
- data gathering
- data analysis
- data storytelling

# Learning Outcomes and Objectives

**Objective 1:** Identify and describe key elements in different types of data visualizations..

**Objective 2:** Visualize data on web-based platforms.

**Objective 3:** Develop hypotheses and find data to address hypotheses.

**Objective 4:** Calculate statistics and visualize key patterns in the data with Python.

**Objective 5:** Document data explorations in markdown.

# Class Structure

- Lectures
- Activities
- Lab Assignments

## classDocs/

- First stop for all materials
- Syllabus
  - Attendance
  - Tokens Policy
  - Using Artificial Intelligence
- Lecture slides

## classDocs/ Continued

- GitHub for accessing and submitting assignments
- Google Colab or VScode for completing assignments
- Discord for announcements and participation
- Canvas for grades

# Assessment

- Class Participation and Activities (30%)
- Lab Assignments (50%)
- Final Project (20%)

Course grades will approximately fall into the following ranges: A (93%), A- (90%), B+ (87%), B (83%), B- (80%), C+ (77%), C (73%), C- (70%), D+ (67%), D (63%), F(60%).

## Other Syllabus Highlights

- Participation is a major part of participation (30% of overall grade)
- Participation includes:
  - Completing group work/activities
  - Quizzes on readings and other class materials
- Four tokens grant automatic extensions for one week
- After the first week, 2 absences will be excused before overall grade is impacted
  - three lates are equivalent to an absence

# How to do well

- Attend lectures
- Come to office hours
- Study with your peers

# Class Survey: Who are you?

## Class Survey

Name, where you are from, favorite sport, and some of your current favorite foods?

# Setting Up

- bookmark the website
- bookmark the 105 Discord Channel
- bookmark notes that you take in Google Colab or elsewhere
- bookmark Canvas
- etc.

# Today's Lab

- Set up GitHub & Discord
- Practice Lab

# Google Colab

## What is Google Colab?

- A cloud-based Jupyter Notebook environment from Google.
- No installation required, you just need a web browser and a Google account

## How to Get Started

- Go to **colab.research.google.com** in your browser.
- Sign in with your Google account.
- Click **File** → **New notebook** to create a new Python notebook.
- Run code cells by clicking the play icon or pressing *Shift + Enter*.
- Save and exit. The .ipynb file will be saved in Google Drive under My Drive → Colab Notebooks.

Google Colab

Practice Colab

# Visual Studio Code (VSCode)

## **A lightweight but powerful source code editor, a free code editor**

- Cross-platform compatibility: available on Windows, macOS, and Linux.
- Extensive language support: JavaScript, Python, HTML, C++, C#, Java
- Rich extension ecosystem
- Integrated Git support: Directly manage your Git repositories within the editor.
- Debugging tools
- Built-in terminal

# Setting up Visual Studio Code

- Download and install VS Code:  
<https://code.visualstudio.com/download>
- Verify VSCode Installation:
- Execute ``code --version`` in Command Prompt (CMD)/Terminal to confirm your VSCode installation.

EXPLORER

WEEK4\_VSCODE

OUTLINE

TIMELINE

DOCKER CONTAINERS

DOCKER IMAGES

AZURE CONTAINER REGISTRY

DOCKER HUB

SUGGESTED DOCKER HUB IMAGES

Welcome

# Visual Studio Code

Editing evolved

## Start

- New File...
- Open File...
- Open Folder...
- Clone Git Repository...
- Connect to...

## Recent

- cmpsc104\_documentEngineering C:\Users\hangz\CIS
- lab3 C:\Users\hangz\CIS\cmpsc104\_documentEngineering
- lab1 C:\Users\hangz\CIS\cmpsc104\_documentEngineering
- lab2 C:\Users\hangz\CIS\cmpsc104\_documentEngineering
- lab1\_solution C:\Users\hangz\CIS\cmpsc104\_documentEngineering
- More...

## Walkthroughs

- Get Started with VS Code  
Customize your editor, learn the basics, and start coding
- Learn the Fundamentals
- Getting Started with EasyCode Updated
- Get Started with Python Development Updated
- Get Started with Jupyter Notebooks Updated

More...

☒ Show welcome page on startup

THANKS

