

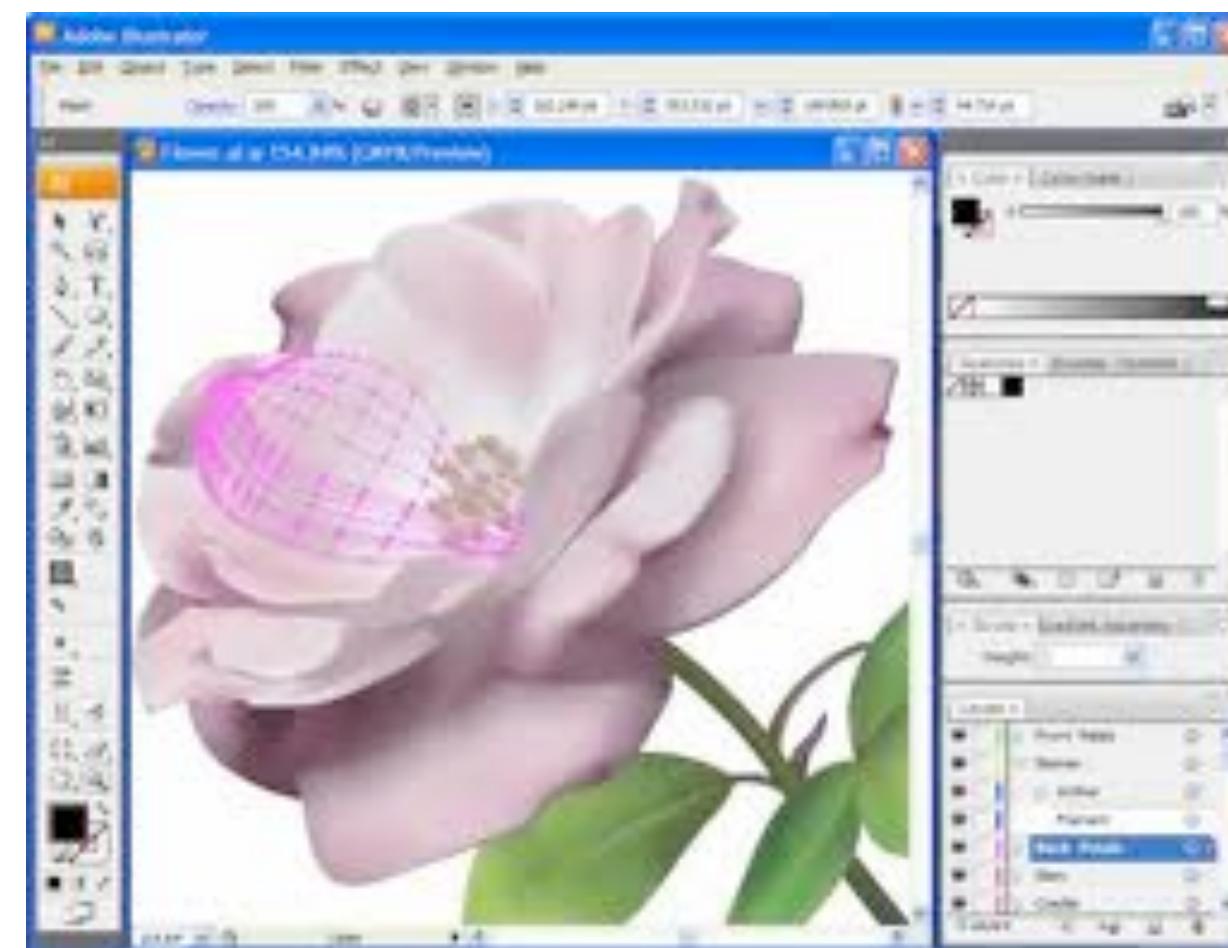
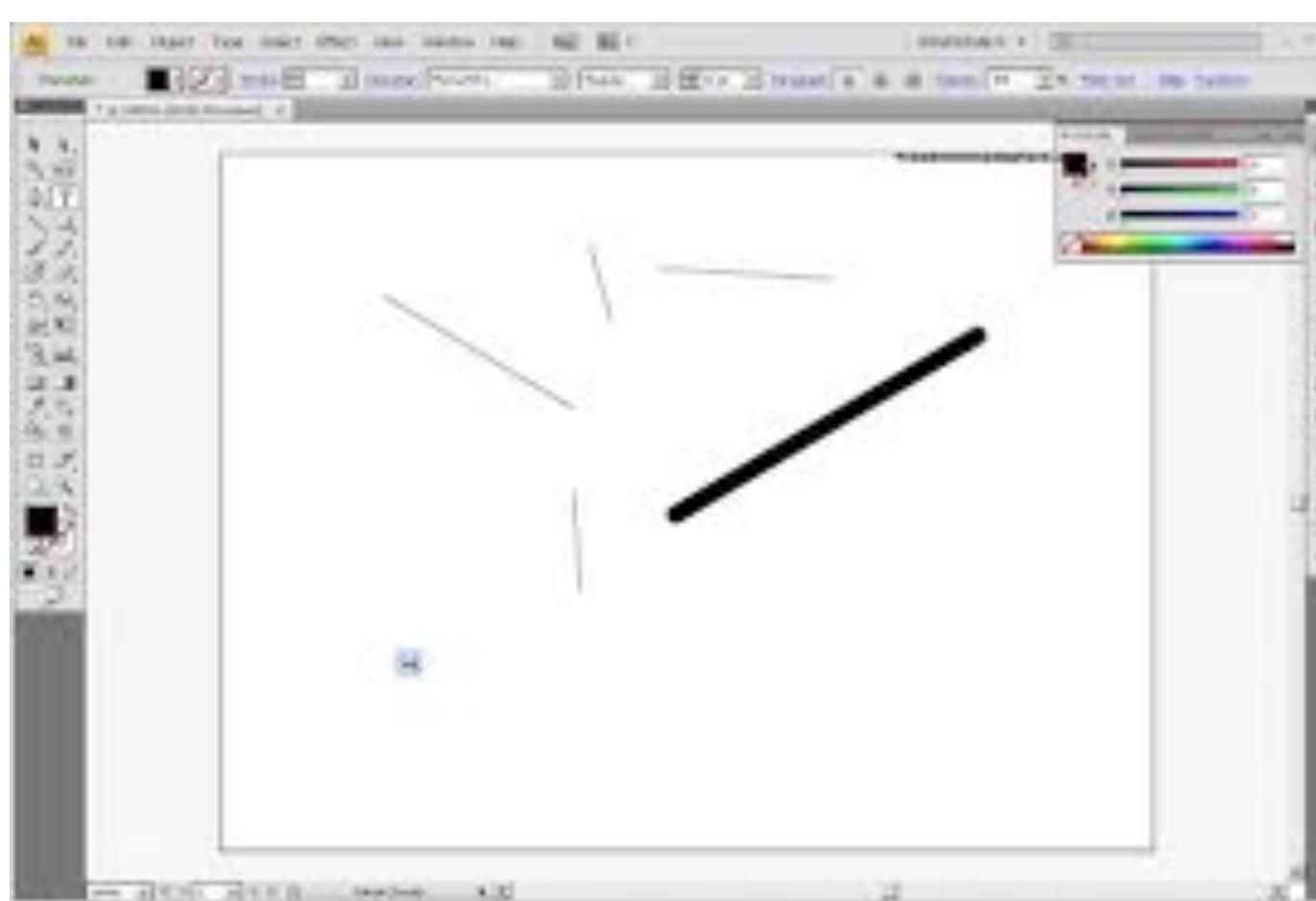


# Introduction

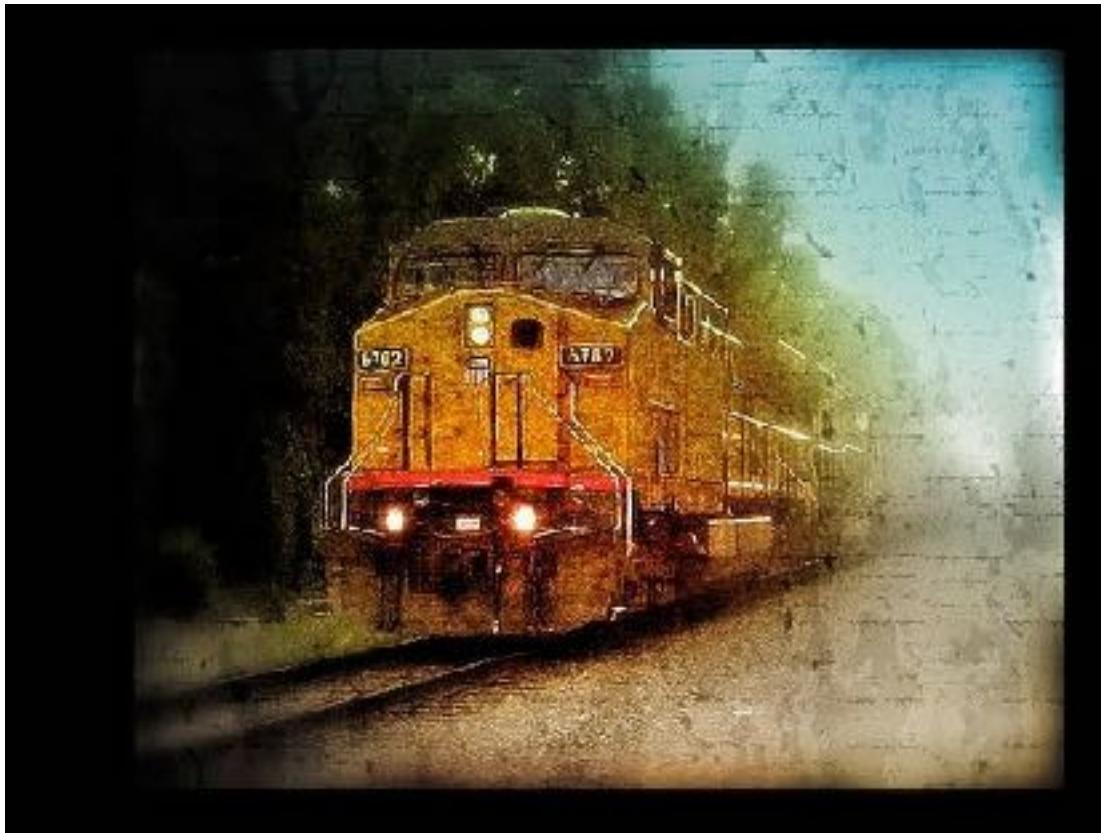
CS 355: Introduction to Graphics and Image Processing

Pixels Everywhere!

# Drawing



# Image Editing



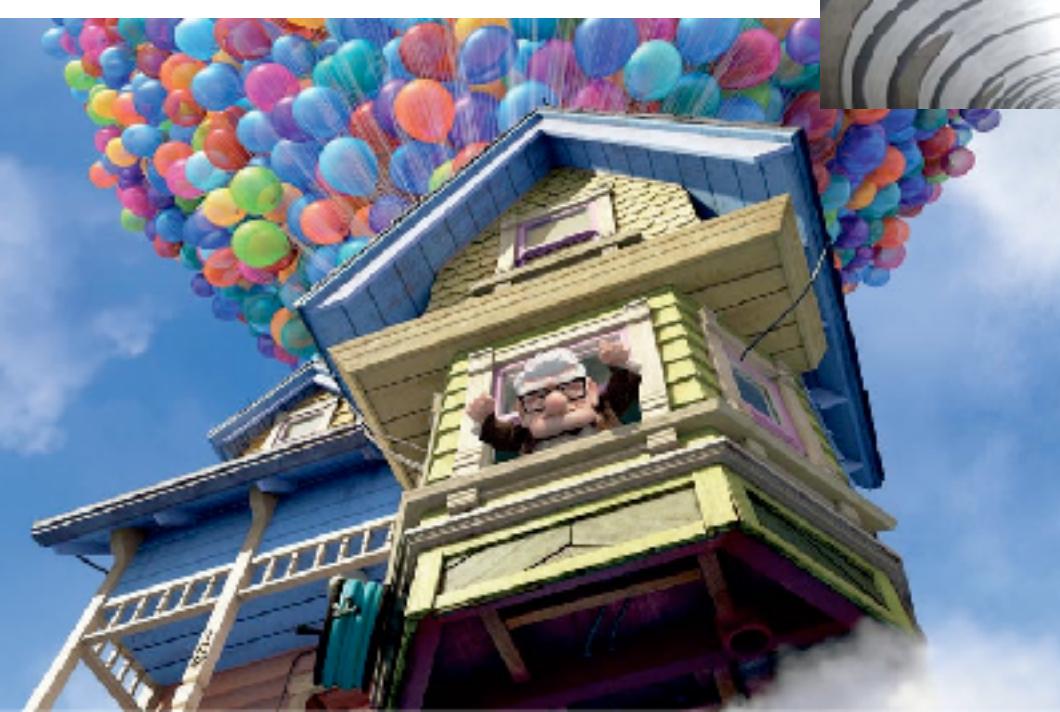
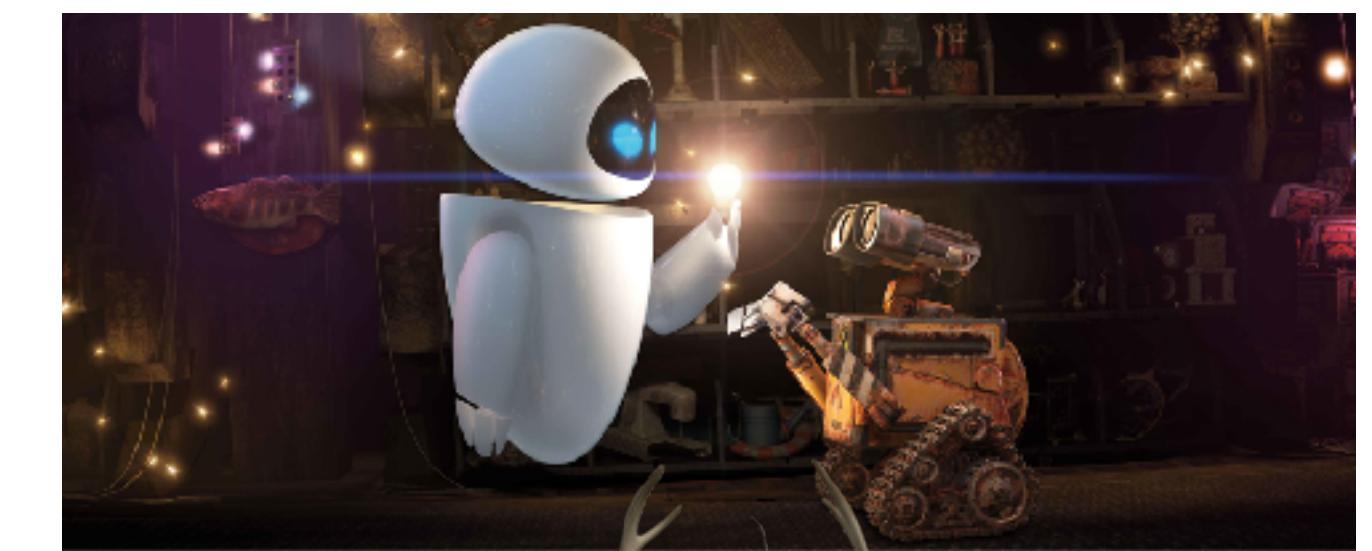
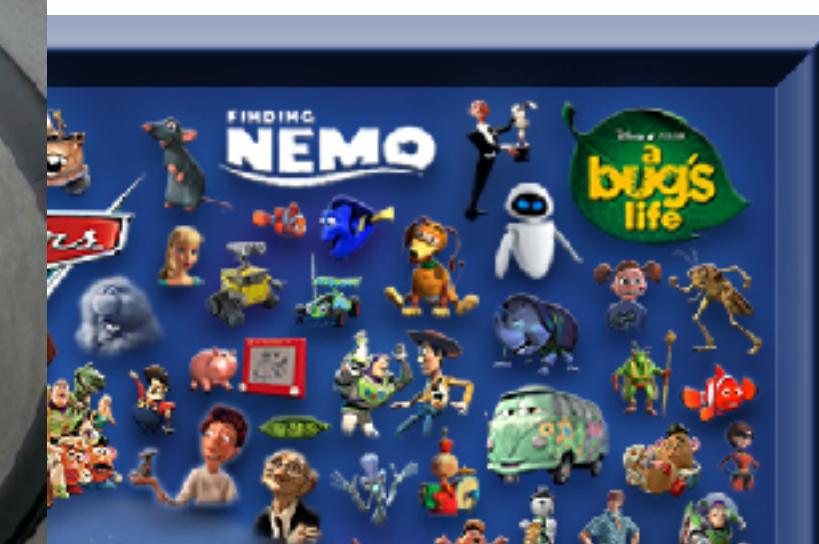
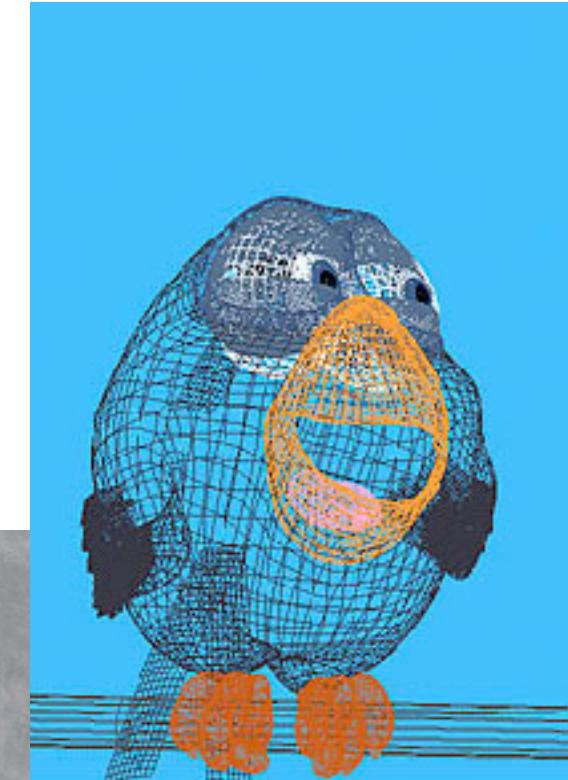
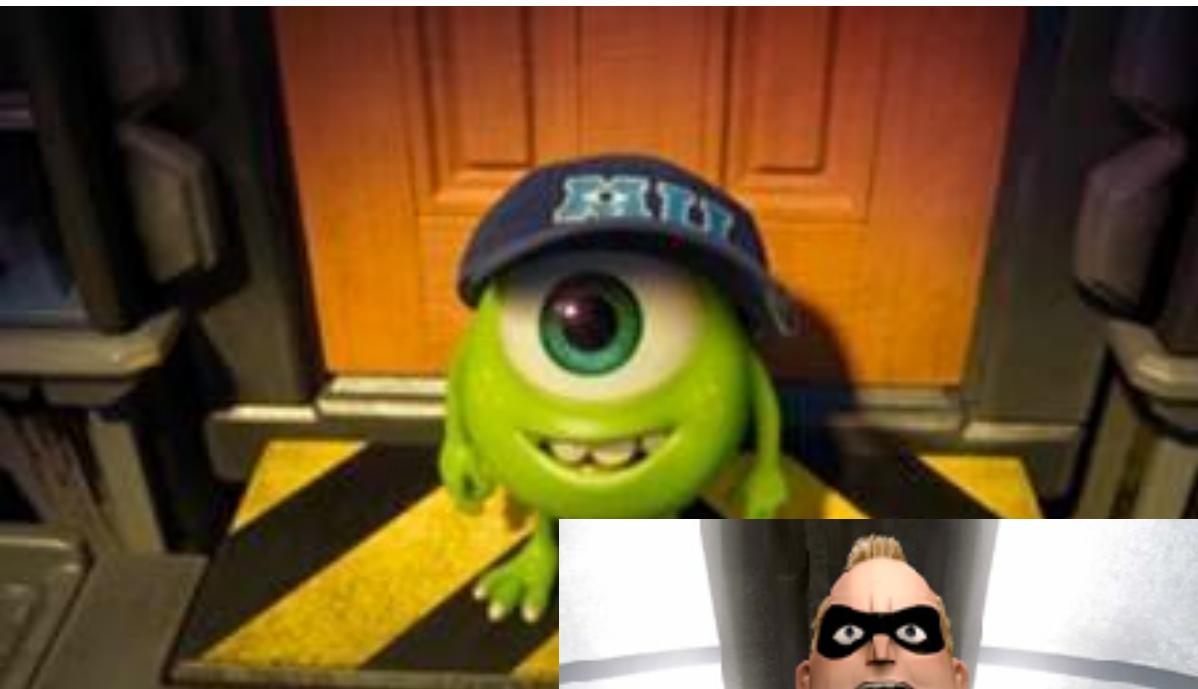
# Graphical Interaction



# Games



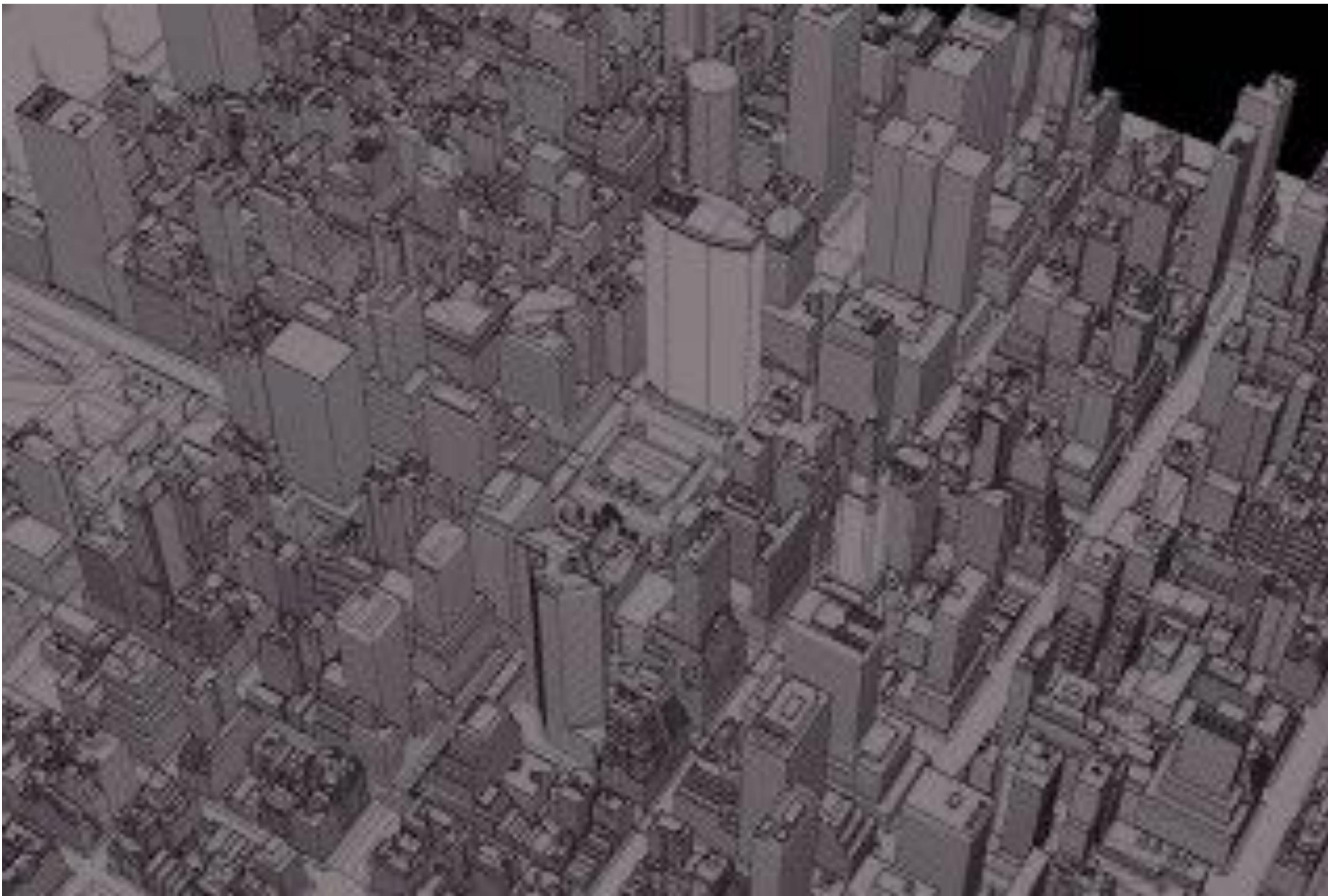
# Animated Films



# Special Effects



# Special Effects





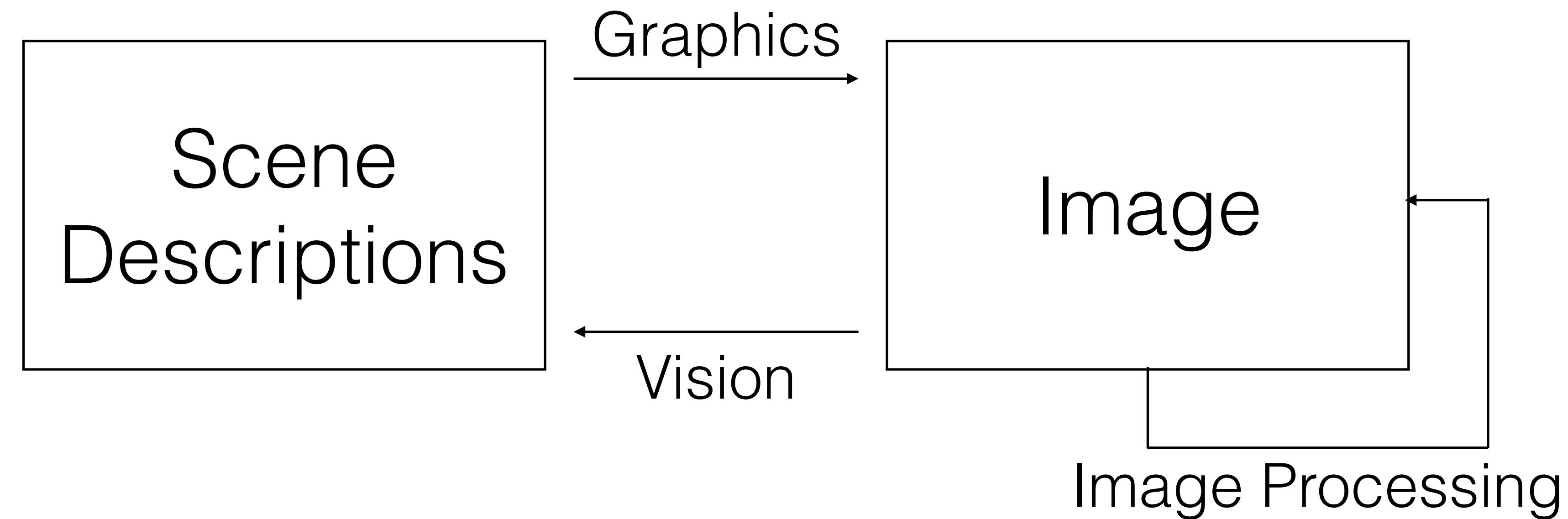
Math

Geometry

~~Pixels Everywhere!~~

Algorithms

# Graphics, Image Processing, and Vision



# Image/Vision

CS 456

CS 470

CS 478

CS 401R

CS 501R

CS 750

CS 650

CS 450

# Graphics

CS 655

CS 455

CS ANIM  
450

CS ANIM  
459

CS 495R

CS 497R



You Are Here

# What You're Going to Build

- Working with Images
  - Brightness, contrast adjustment (2)
  - Color image processing (3)
  - Blending and compositing (3)
  - Neighborhood operations: (3)
    - noise removal
    - sharpening, edge detection
- 2D Transformations
  - Simple rotation, translation, scale (4)
  - Homographies (9)
- 3D Graphics
  - Wireframe 3D rendering w/ OpenGL (5)
  - Hierarchies of transformations (6)
  - Wireframe 3D rendering (7)
  - Visibility, lighting, shading (8)
  - Geometric tests (9)
  - Image warping and texture mapping (9)
  - Frequency-domain processing (10)

# Syllabus

- Instructor / TAs
- Prerequisites
- Policies
- Schedule
- Programming Labs
- Written Homework
- Exams

# Next up...

- Q&A on the syllabus, policies, etc. — read them before next time
- Introduction to Python and Jupyter
- Introduction to Lab #1