CSE464B
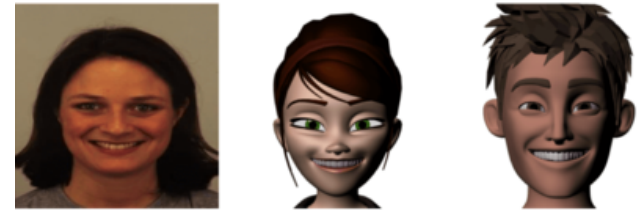
RESEARCH TOPICS IN COMPUTER ANIMATION

Jan 5, 2018

Introduction (GRAIL and FERG)

- **Deepali** - Fourth year PhD student
  - Research Interests:
    - **Expressive Character Animation**
    - **Cartoon lip synchronization**

- **Alex** – CSE Phd Alum, Researcher (Zillow)

- **Gary** – Facial expression expert, artist

- **Barbara** - Animation Capstone Professor

Facial expression transfer

Cartoon lip synchronization

Student Introduction

- Year
- Background
- Interests
- Research experience
- Coding experience
- Expectations from the course
- If you had to identify with an animal, what would it be? ☺

Goals for the class

- Introduction to foundations of research in science and technology

- Build research skills by reading and evaluating papers

- Design and implement research projects related to Animation, Graphics, and Machine Learning.

Class structure

- Paper reading and summary submission (20%)
  - 2 papers will be assigned each week

- Participation & attendance (20%)
  - Group discussion

- **Project (60%)**
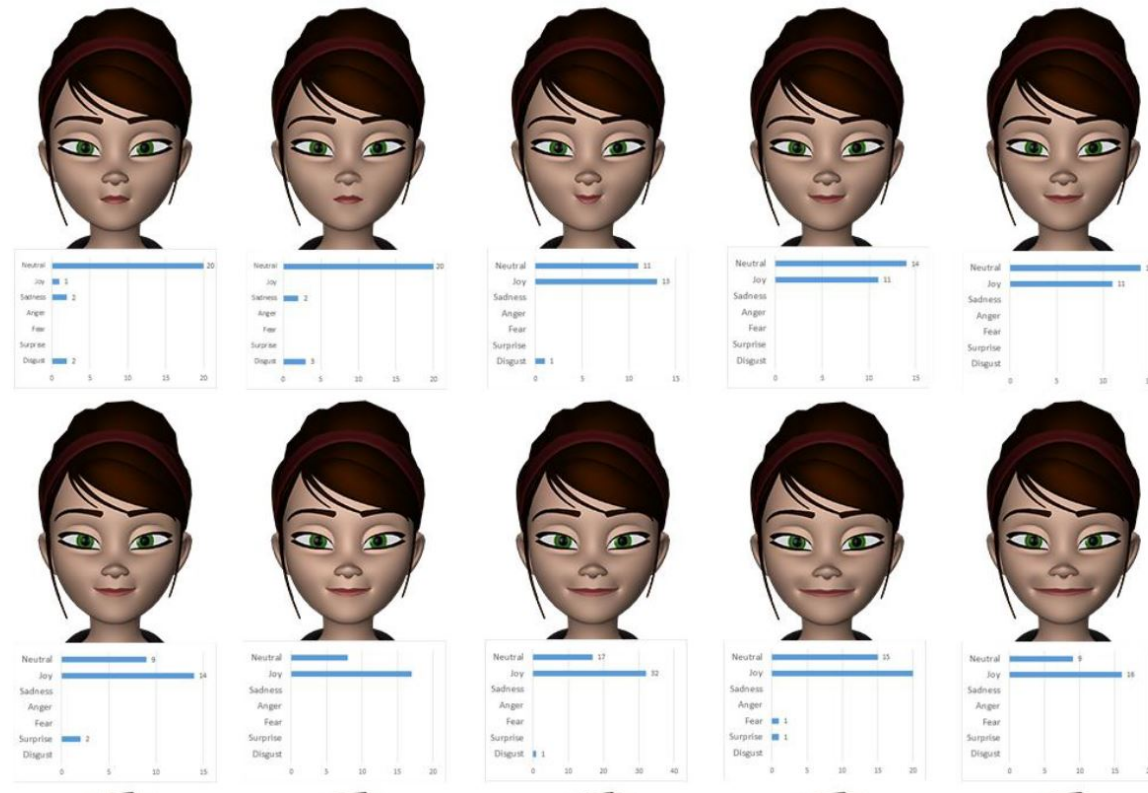
Projects from Spring 2016

Recognizing Emotions in Kaomoji (ML)

Joy	Sad	Anger	Surprise
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Perception in 2D vs Virtual Reality

Closed mouth smile testing (Perception)

Partial face testing (Perception)

Results – Sadness (Eyes)   Avg: 97%

Sadness: 96%   Sadness: 98%   Sadness: 96%
(-0%)   (+2%)   (-0%)
Anger: 2%   Fear: 2%   Disgust: 4%
Fear: 2%

Results – Anger (Eyes & Mouth)   Avg: 93.5%
(E: 88%   M: 98%)

Anger: 96%   Anger: 88%   Anger: 98%   Anger: 92%
(-4%)   (-8%)   (+2%)   (-6%)
Neutral: 2%   Neutral: 8%   Disgust: 2%   Disgust: 6%
Sadness: 2%   Surprise: 2%
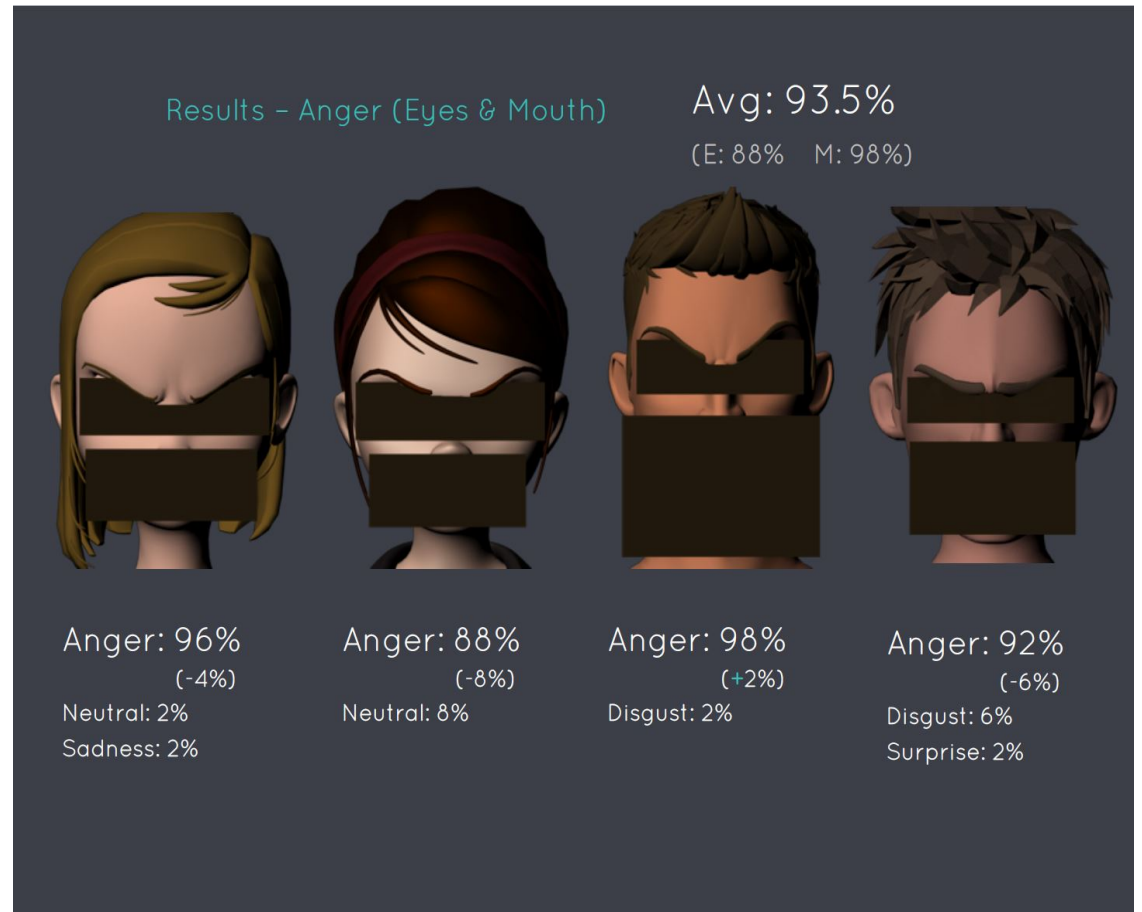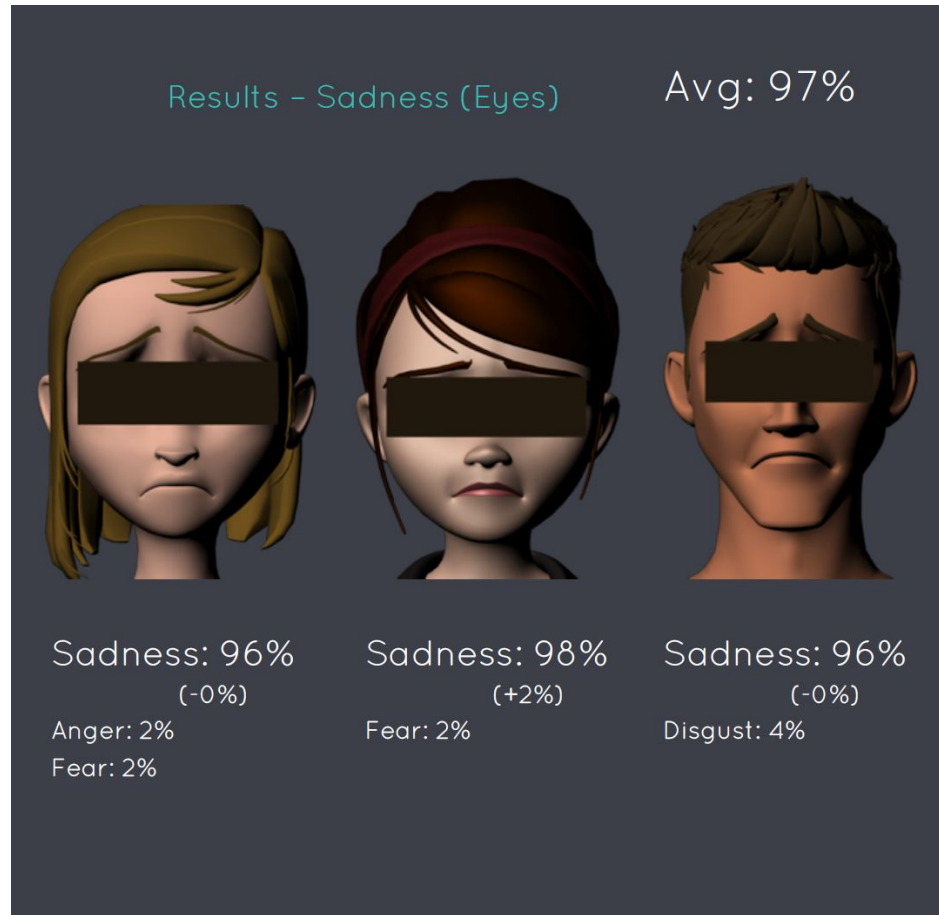
Week 1 - Papers

- **Paper 1**
  How To Read a Paper, Keshav, 2007

- **Paper 2**
  Efficient Reading of Papers in Science and Technology, Hanson, 2006

- **Paper 3**
  Principles of traditional animation applied to 3D computer animation, Lasseter, 1987

- **Paper 4**
  The Cartoon Animation Filter, Wang et al., 2006

- **Assignment 1 (Paper summaries) : Due on Jan 12, 2018 9:00 AM**

Evaluating Research Papers

If you are enrolled in CSE 464, then you must read several papers and submit written reviews by the specified deadline. Late submissions will not be accepted. Your evaluations should have the following form:

- Your name.
- Paper title and author(s).
- What problem does the paper address?
- Two (or more) most important new ideas in the paper, and *why*.
- What is the approach used to solve the problem?
- How does the paper support or otherwise justify its arguments and conclusions?
- Two ways the paper could be improved, and why.
- Two important, open research questions on the topic, and why they matter.

You must submit evaluations as a PDF file. You should upload the evaluations to the online Catalyst dropbox. Your evaluation for each reading must be less than one page long, be single-spaced, use 12pt font, and have at least 1 inch margins; We expect for most paper evaluations to be approximately 1/2 to 3/4 pages long. You are welcome to, and in fact encouraged to, discuss the papers with other students in the class. However, you must write the evaluations on your own.

Course details

- Class webpage https://courses.cs.washington.edu/courses/cse464b/18wi/

- Class mailing list (to the entire class) : cse464b_wi18@uw.edu
- Staff mailing list (to the instructors) : cse464b_wi18-staff@cs.washington.edu

- Dropbox link : https://catalyst.uw.edu/collectit/dropbox/summary/deepali3/41179

- Discussion board : https://catalyst.uw.edu/gopost/manage/deepali3/44291

- In case of any other issues, email deepalia@cs.washington.edu

Questions?