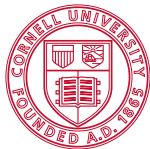


Lecture 10

Audio Processing

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Cornell University

July 24, 2013

Before we begin

HW3 Due Mon, July 29, 10am

OH Upson B7, Thursday, 3-5pm

PR Projects

Today

- Binary Files
- Time Series
- Sound and Sampling
- Audio Files

Anatomy of Files

- Text Files vs. Binary Files
- Example Text files:
.txt (plain), .html (markup)
- Example Binary files:
.exe .bmp .png .zip

X-raying Binary Files

- Use hexdump
- File formats
- File headers

Time Series

- Ithaca Weather
- Stock Market
- Audio Signals

Sound

- Waves
- Frequency
- Sampling

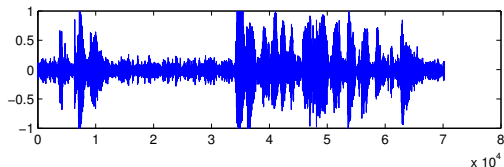
Let's split!

puzzlin.wav

"It's puzzling"

"I don't think I've ever seen anything quite like this before"

```
[hal, rate] = wavread('puzzlin.wav');  
plot(hal);
```



Let's split!

```
[hal, rate] = wavread('puzzlin.wav');  
% rate is 11025  
  
n = 25000;  
hal1 = hal(1:n);      % upto 2.28 sec  
hal2 = hal(n+1:end);  % the rest  
  
subplot(1,2,1); plot(hal1);  
subplot(1,2,2); plot(hal2);
```

