Programming and Data Science for User Experience Researchers

HCDE 598 A — Jonathan T. Morgan & Ray Hong

Week 4 | April 18, 2016

Your feedback

Week 3 feedback survey

- Review too slow, review too fast, review just right
- Real examples were/are appreciated
- Would like to go through more "data handling" strategies
- Real life examples would be helpful
- It was hard to connect the new material (dictionaries) to the coding challenges
- "There are multiple sets of challenge questions discoverable on the wiki for each week"
- I got stuck/ran out of steam during project time

Changes based on feedback

- **Tonight's lecture:** we'll revisit material from last week that was inadequately covered, using a concrete example

- **Real life research examples:** There are two this week!

- **Project time:** we'll do project time from 8:40 - 9:20, and end with something a little more structured and slightly less taxing, but still useful—an end-to-end research example from my own work.

Overview of the day

- Feedback review & administrative stuff (6 - 6:15)
- Week 3 coding challenges (6:15 - 6:45)
- Week 3 concepts follow-up (6:45 - 7:15)
- *10 minute break*
- Reading and writing text files (7:25 - 8:00)
- Burke-Gilman traffic counter project intro (8:00 - 8:30)
- *10 minute break*
- Peer programming: BGT traffic project (8:40 - 9:20)
- Notification survey analysis walkthrough (9:20 - 9:45)

Curriculum tweaks

- **Final project idea due date pushed back 1 week, to May 2 (week 6)**
  - Reason: you don't have all the info/tools you need to make these choices!
  - Ray and I will present examples of datasets and rq's next week.
  - By the end of next week, you will know how to work with APIs and JSON-formatted data—which is how most of you will be gathering your final project datasets.

- **MySQL is being dropped from the curriculum :(**
  - BUT… I will still provide some examples of MySQL databases that contain data you can use for your final project.
  - AND… I'll provide links to self-study resources for those who want to learn (or brush up on) MySQL.

What we'll cover instead

- **Week 5:** intro to APIs and JSON. (Warning: contains kittens)

- **Week 6:** data visualization with MatPlotLib (and other tools)

- **Week 7:** more advanced text processing with RegEx

- **Week 8:** basic statistics with SciPy

- **Week 9:** Research design, or, "how to tell stories with data"

Reminder

- The coding challenges assigned this week are **required**

  - Due next week before class

  - You have to attempt the first 4 challenges, and turn in your code

  - There will be a dropbox on Canvas

  - You will be graded pass/fail based on whether you turned in code that attempts all 4 challenges by the due date

  - You do NOT have to attempt challenges #5 and #6, but they could be fun...

Questions?

Research programming example

Wikipedia Editor Survey:
use of the Notifications feature

Article Talk

Tamalpais Valley,

From Wikipedia, the free encyclopedia

"Big Coyote, California" redirect
California.

Tamalpais Valley (also known as "
"Coyote Valley" or "Coyote Hollow"
Marin County, California.[3]

Contents [hide]
1 Land
2 People
3 Government
4 History
5 Recreation
6 Points of interest
7 See also
8 References
9 External links

Land

Tamalpais Valley is located at 37°53
in size, with an elevation of 108 feet
the north and Sausalito to the south.
about 10 minutes from the Golden Gate Bridge and fifteen minutes from San
Francisco. California State Route 1 (also known as Shoreline Highway and the
Pacific Coast Highway) runs through the Valley and is the road most often used to
access western Marin County.[5]

Notifications ❓

🖼️ **Mary Dunlap** and 1 other posted on your talk page.
"Great article on Tam Valley!"
6 minutes ago | View changes

😊 **Mary Dunlap** thanked you for your edit on **Tamalpais Valley**
"Does anyone have references about Coyote Ridge?"
11 minutes ago | View changes

🖼️ **Fabrice Florin** mentioned you on **Talk:Tamalpais Valley**
"Here are some tips on Coyote Ridge, to improve your Tam
Valley Page."
35 minutes ago | View changes

✅ **Kaldari** reviewed a page you started: **Tamalpais Valley**
44 minutes ago

💡 Wikipedia is a free encyclopedia written by people like you.
Get started by making your first edit!
13 hours ago

Ⓦ Welcome to Wikipedia, Jane Finch! We're glad you're here.
13 hours ago

»» **All notifications**   ⚙ **Preferences**

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Government
· **Senate**   Mark Leno (D)
· **Assembly**   Marc Levine (D)
· **U. S.**   Jared Huffman (D)[1]
Congress

COMPOSITE SCREENSHOT

Q8. Please rank the following list of notification types in order of how important it is that you *read* this type of notification soon after it occurs.

> *Re-order the list below by dragging the most important notification to position 1, the second most important to position 2, and so on.*

- other pages now link to a page you created
- someone sent you an email
- someone mentioned you on a talkpage
- your edit was reverted
- someone thanked you for your edit
- a page you created was reviewed
- your user rights were changed
- someone left a message on your user talkpage

0%   100%

Research questions

Sampling: logged-in users who have at least 1 unread notification (n = 120)

Questions
- ○ Which types of Notification are editors exposed to?
- ○ Which types of Notification do editors consider most important?

Design goal: figure out which notifications to prioritize in the feed, which ones to de-emphasize

Podium

Allie Deford
Morgan Duffy
Khuyen "Max" Lam
Daren Chaisy

Ender Barillas
Jonathan Wang
Olivia Frederick
Yuan Zhuang

Sahil Anand
Nick Throm
TJ Koines
George Karalis

Nikhil Venkatesh
Susan evans
Spencer James
Abhishek Anand

Gabriela Madrid
Nick Anderson
John Jessup
Demi Boe

David wang
Kristine Kohlhepp
Setumadhava G Kathawate
Emma Bulajewski

Vishwas Shetty
Todd Little
Nicole Bernardi
Anne Burker

+2 students