Programming and Data Science for User Experience Researchers

HCDE 598 A — Jonathan T. Morgan & Ray Hong

Intro lecture | Week 1 | March 28, 2016

Introductions

What is Data Science?

"80% of analytics is sums and averages"

- Aaron Kimball, CTO Zymergen Inc.

"80% of analytics is sums and averages"

Gathering, cleaning, integrating, restructuring, transforming, loading, filtering, deleting, combining, verifying, extracting, shaping, massaging… data

"answering even a simple scientific question requires lots of choices that can shape the results."

- Christie Aschwanden, "Science Isn't Broken"
FiveThirtyEight

fivethirtyeight.com/features/science-isnt-broken

"Science is becoming a database query problem"
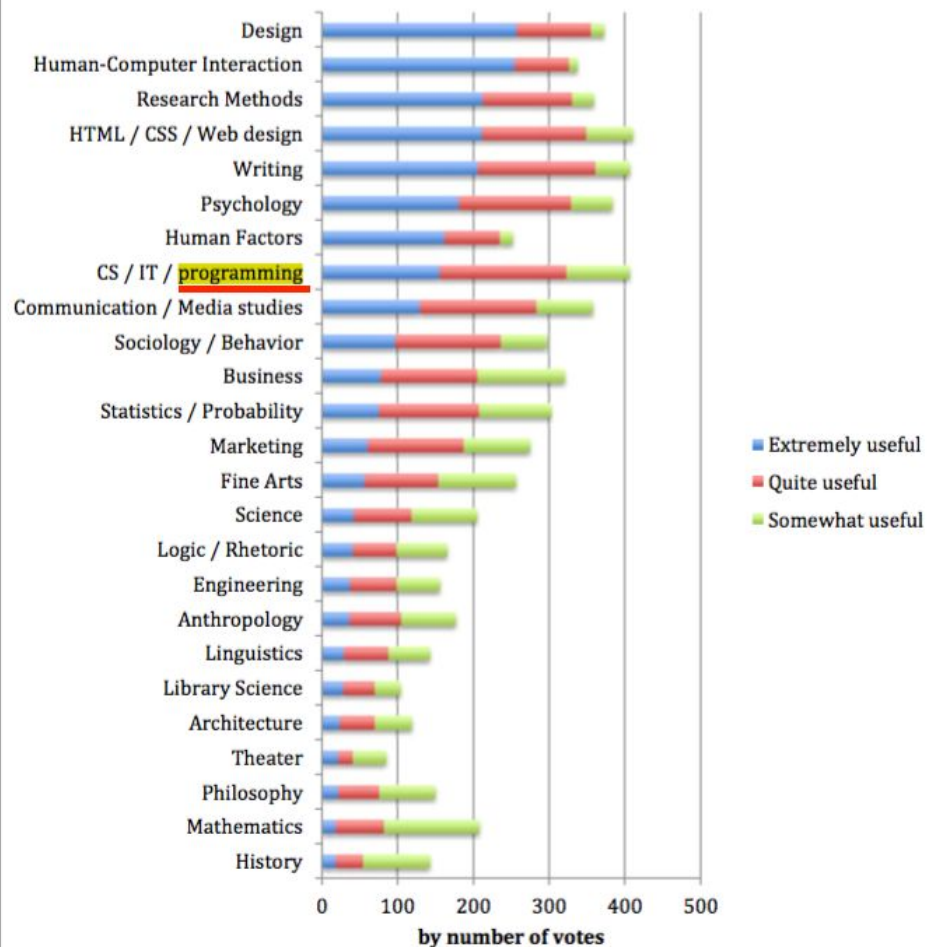
- Bill Howe, Director of UW Data Science MS Program

"Science is becoming a database query problem"

Identifying, exploring, hypothesizing about, analyzing, understanding, validating… data

Why 'for UX Researchers?'

How useful were these subjects?

Horizontal bar chart showing number of votes for each subject, segmented into Extremely useful (blue), Quite useful (red), and Somewhat useful (green).

Subjects listed top to bottom:
- Design
- Human-Computer Interaction
- Research Methods
- HTML / CSS / Web design
- Writing
- Psychology
- Human Factors
- CS / IT / programming
- Communication / Media studies
- Sociology / Behavior
- Business
- Statistics / Probability
- Marketing
- Fine Arts
- Science
- Logic / Rhetoric
- Engineering
- Anthropology
- Linguistics
- Library Science
- Architecture
- Theater
- Philosophy
- Mathematics
- History

Legend:
- ■ Extremely useful
- ■ Quite useful
- ■ Somewhat useful

X-axis: 0, 100, 200, 300, 400, 500 — by number of votes

Responsibilities

• Collect and analyze user behavior data through a variety of channels, such as user testing, semi-formal interviews, observation, surveys, A/B testing and log analysis

• Work cross-functionally with Design, Product Management, and Engineering to incorporate user-centered research at all stages of the product cycle

• Collaborate with Content Strategy to measure the impact of copy changes

• Effectively communicate results and illustrate suggestions to product teams through clear writing

• Proactively design studies that address both user behavior and attitudes

• Partner with engineers, analysts, and other technical roles to create and share research

Preferred

• Experience in conducting UX research, experience conducting applied and product related research

• Experience conducting international/cross-cultural research

• Experience in applied product research

• Experience with SQL and Python

• Ability to communicate research results and illustrate suggestions in compelling and creative ways

• Experience with log analysis or statistical analysis

User Experience Researcher

San Francisco, CA, USA · San Bruno, CA, USA · Mountain View, CA, USA

User Experience & Design · Full-time

APPLY NOW   Find connections   Know someone at Google? Reach out to them

User Experience (UX) Researchers work to answer the most challenging questions in design. In this role, you will reveal what our users need from our products by conducting primary research, exploring the behaviors and motivations of our users, and working with teams of Designers, Product Managers, Engineers and others to develop new features. You'll inspire change at all stages of product development by delivering exciting oral, written and visual presentations about our findings. Most importantly, your job as a researcher is to help the UX team understand what would make a user's experiences feel more intuitive, accessible, fun—and even magical.

With considerable experience, you evaluate all the features contributing to user experience, providing expertise, collaborating internally and occasionally leading projects. You contribute new processes and identify product and use requirements.

Responsibilities

- Conduct independent research on multiple aspects of how users experience online search.
- Collect and analyze user behavior through server logs, online experiments (A/B testing), benchmark studies, lab studies, and surveys.
- Work with designers, product managers, engineers, and research managers to prioritize research opportunities in a fast-paced, rapidly changing environment.
- Understand and incorporate complex technical and business requirements into research.
- Advocate research findings to diverse audiences through written reports and oral presentations.

Minimum qualifications

- BA/BS in Computer Science, Human-Computer Interaction, Cognitive Science, Experimental Psychology, Anthropology, Information Science or related field or equivalent practical experience.
- 2 years of work experience in an applied

Preferred qualifications

- 4 years of relevant work experience, including experience integrating user research into product designs and design practices.
- Experience with SQL, Python, SPSS and remote usability testing tools, such as

Example from my own work
Finding people to talk to about a new feature

Do any power users actually use the Visual Editor?

Why Python?

Syllabus review

Group 1	Allie Deford	Morgan Duffy	Khuyen "Max" Lam	Daren Chaisy
Group 2	Ender Barillas	Jonathan Wang	Olivia Frederick	Yuan Zhuang
Group 3	Sahil Anand	Nick Throm	TJ Koines	George Karalis
Group 4	Nikhil Venkatesh	susan evans	Spencer James	Abhishek Anand
Group 5	Gabriela Madrid	Nick Anderson	John Jessup	Demi Boe
Group 6	David wang	Kristine Kohlhepp	Setumadhava G Kathawate	Emma Bulajewski
Group 7	Vishwas Shetty	Todd Little	Nicole Bernardi	Anne Burker