

# Quantified Self

Ethnography of a  
Digital Culture

# Who am I?

- **Anthropologist**
  - Study of cultures
  - Fieldwork in **Belize, Ecuador, Silicon Valley**
  - Not like Indiana Jones
- **Informatician**
  - Study of information
  - Specialization in Human-Computer Interaction
  - Not related to magicians

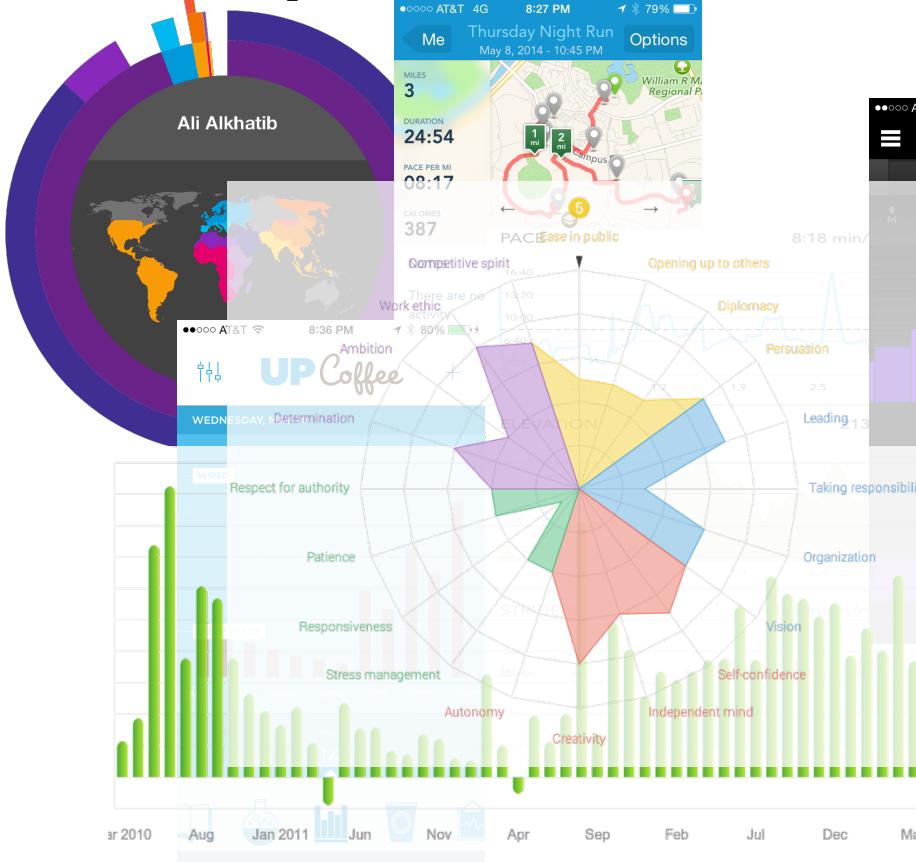
# Motivation

- Data is fascinating
- Our lives are increasingly data-driven
- We know relatively little about this culture



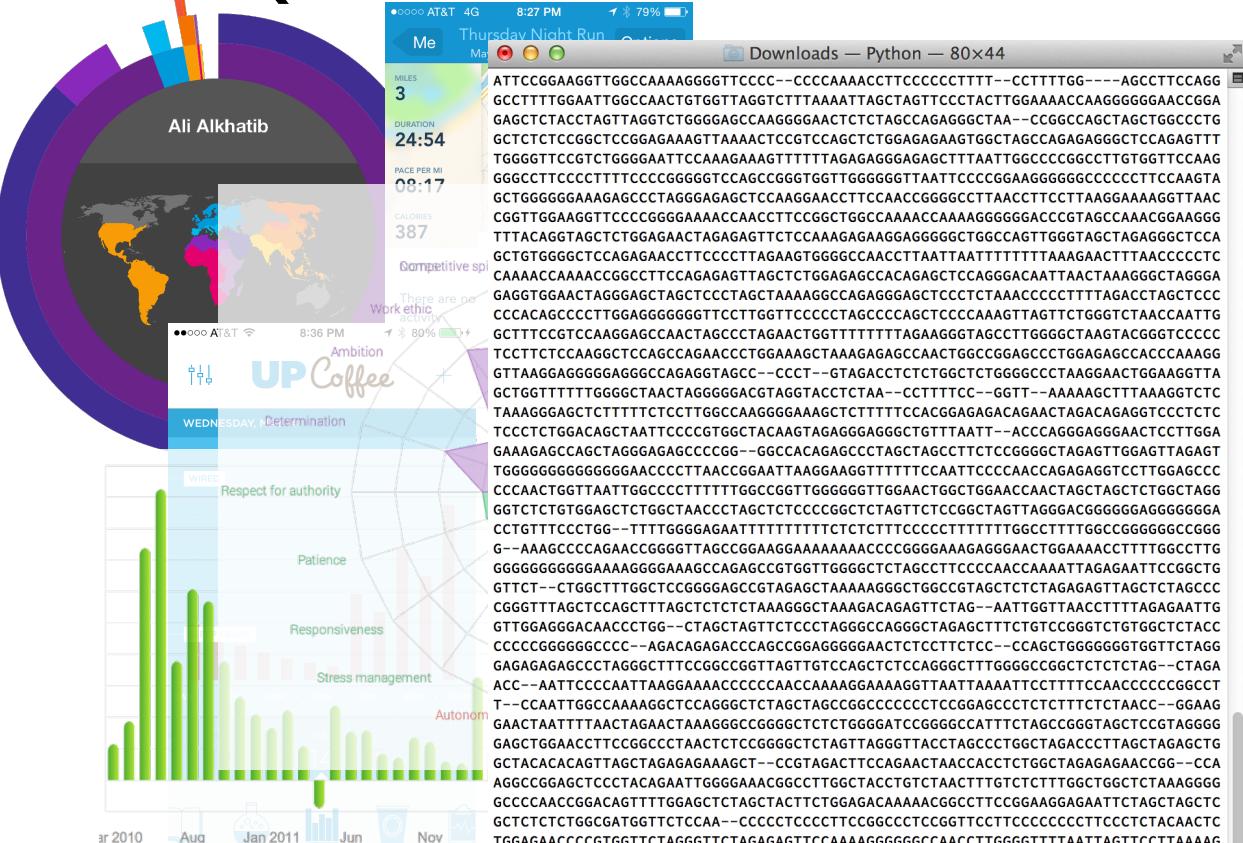
# What is Quantified Self?

- Genetics
- Fitness
- Sleep
- Nutrition
- Finance
- Cognition



# What is Quantified Self?

- Genetics
- Fitness
- Sleep
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- Finance
- Cognition
- Big Data



# So Quantified Self is...

Kind of everything.

Sorry, that's not very helpful.

# Some Literature

- Historical background
  - Censuses
- Public Science
  - Reddit
- Health
  - Genome sequencing

The screenshot shows a list of seven posts on the 'Nootropics' subreddit. The posts are as follows:

- 1 Vitamin D infographic (foundmyfitness.com)  
submitted 12 hours ago by Possibilist  
15 comments share pocket
- 2 The diffusion of Performance and Image-Enhancing Drugs (PIEDs) of Piracetam (2014) (ncbi.nlm.nih.gov)  
submitted 15 hours ago by shrillthril  
29 comments share pocket
- 3 Omega-3 fatty acids and dementia (ncbi.nlm.nih.gov)  
submitted an hour ago by sd002002  
comment share pocket
- 4 Nondirective meditation (ND) allows for more memories processing activates default mode network and areas associated with memory (journal.frontiersin.org)  
submitted 14 hours ago by gandalfisatranshuman  
4 comments share pocket
- 5 Where can I get my DNA sequenced? (self.Nootropics)  
submitted 17 minutes ago by lancypancy  
comment share pocket
- 6 L-theanine win (self.Nootropics)  
submitted 13 hours ago by liinijiali  
9 comments share pocket
- 7 experiences with Guanfacine? (self.Nootropics)  
submitted 9 hours ago by odspot  
2 comments share pocket

# Some Literature



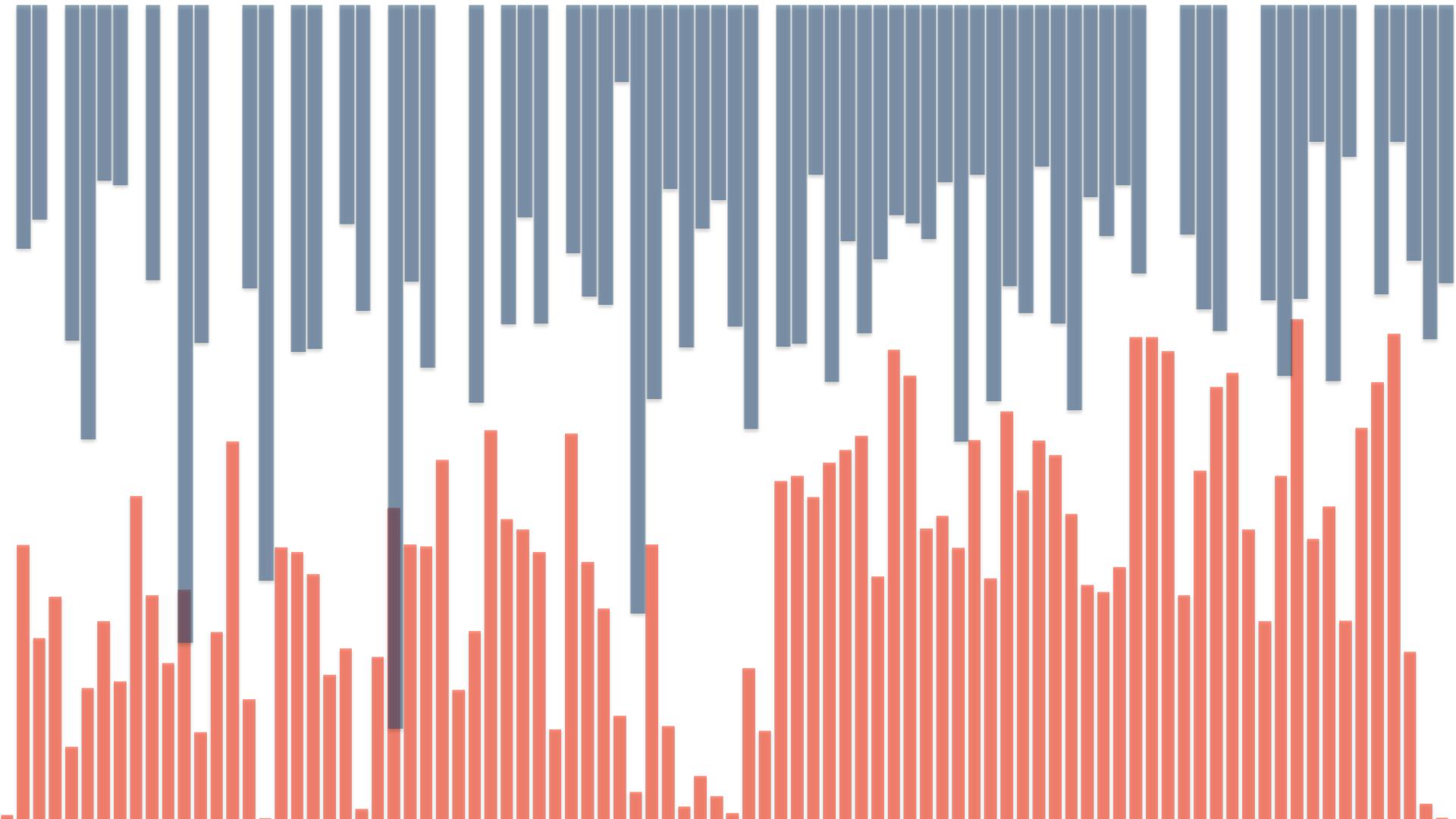
- Gamification
  - Competitive steps
- Algorithmic Living
  - Data-driven life
- Quantified Other
  - Comparative analytics
- Big Data
  - City-scale data

# Quantified Self, the Culture

- Self-scrutinizing
- Private and Public
- Democratizing
- Digital and Analog

# Methods

- Interviewing
- Content analysis
- Participant-observation
  - Jawbone UP
  - Withings Scale
  - Mint
  - Last.fm
  - 23andMe
  - Pocket
  - Runkeeper





# UP Coffee



## UP COFFEE EXPERIMENTS

### AFFECT YOUR SLEEP?

UP COFFEE EXPERIMENT #3

## 10 DAYS OF DATA



It's just as we thought. The more caffeine you consume, the worse you sleep. You've been averaging 387mg a day. Every extra 20mg of caffeine in your bloodstream at bedtime costs you 13m of shut-eye. Bottom line? Mom was right.

Generated on May 5th. Log caffeine and sleep for 9 more days to refresh.



# UP Coffee



## CAFFEINE CONSUMPTION

## SLEEP AVERAGE



5h 22m  
based on 14 days



5h 39m  
based on 23 days



6h 56m  
based on 11 days

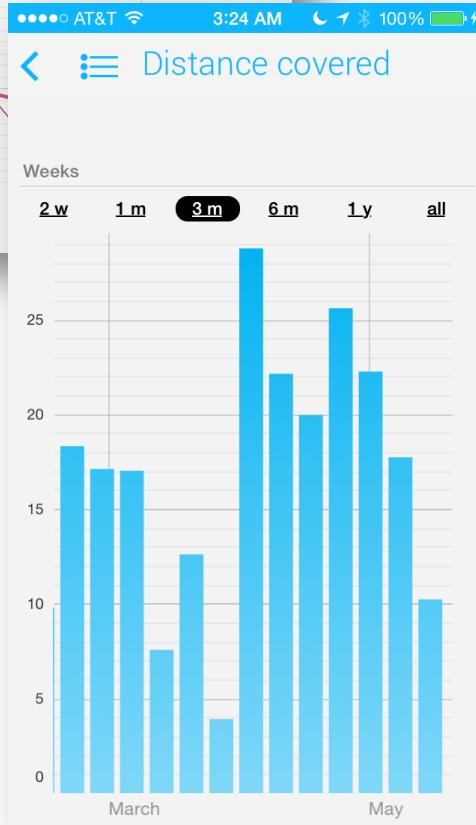


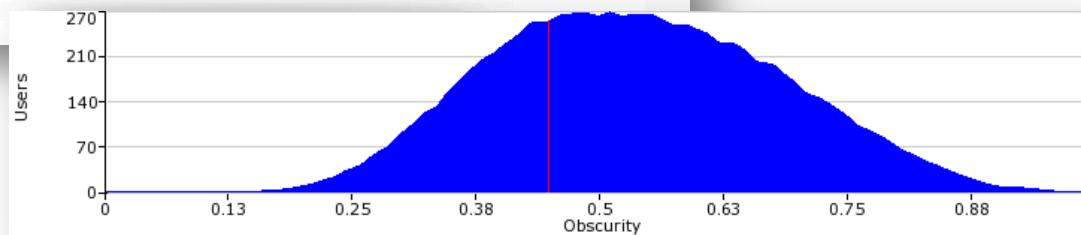
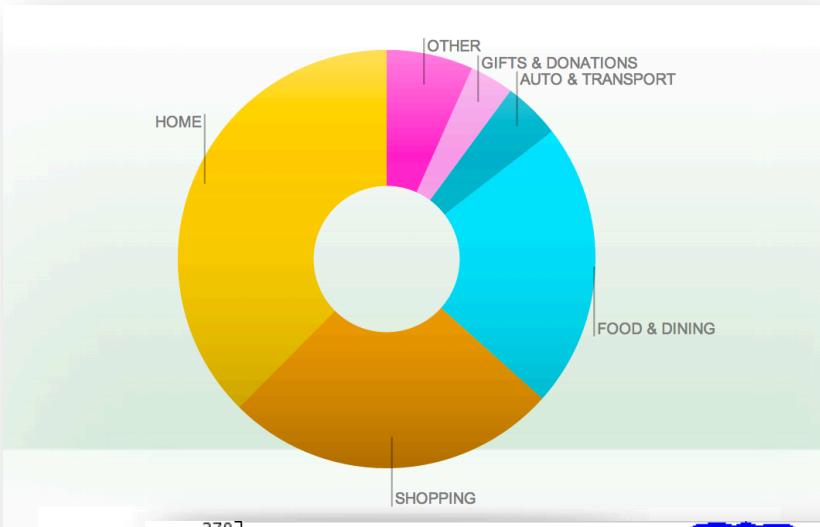
No readings yet



No readings yet







NAME	CONFIDENCE ▲	OUTCOME
Alcohol Flush Reaction	★★★★	Does Not Flush
Bitter Taste Perception	★★★★	Can Taste
Earwax Type	★★★★	Wet
Eye Color	★★★★	Likely Brown
Hair Curl 	★★★★	Slightly Curlier Hair on Average
Lactose Intolerance	★★★★	Likely Intolerant
Malaria Resistance (Duffy Antigen)	★★★★	Not Resistant
Male Pattern Baldness 	★★★★	Decreased Odds
Muscle Performance	★★★★	Likely Sprinter
Non-ABO Blood Groups	★★★★	See Report
		Not Resistant
		Not Resistant
		Typical
YOUR RISK	AVG. RISK	COMPARED TO AVERAGE
17.1%	22.8%	0.75x 
4.3%	7.2%	0.60x 
2.6%	6.5%	0.40x 
1.5%	2.0%	0.74x 
1.2%	1.6%	0.73x 
0.89%	2.38%	0.37x 
0.74%	2.86%	0.26x 
0.60%	0.75%	0.79x 
0.20%	0.34%	0.59x 
YOUR RISK	AVG. RISK	COMPARED TO AVERAGE
31.7%	25.7%	1.23x 
22.4%	11.4%	1.98x 
0.56%	0.36%	1.57x 
0.42%	0.23%	1.80x 
0.10%	0.08%	1.25x 
0.20%		

ACTIVITIES

+ May '14 34

+ Apr '14 72

+ Mar '14 45

+ Feb '14 57

+ Jan '14 60

+ Dec '13 32

+ Nov '13 27

+ Oct '13 20

**Thursday Run**

MAY 08, 2014 - 10:45 PM

MI DURATION AVERAGE PACE CALORIES BURNED

3.00 24:54 8:17 387

Map showing a run route starting at Aldrich Park, running through University of California, Irvine, and returning to Aldrich Park. The route is highlighted in red and shows segments of 1 mi and 2 mi. The map also includes green shaded areas representing parks and other landmarks like William R. Mason Regional Park.

# Findings

- Quasi-quantitative
- Obvious insights



Gateway Study Center - UC Irvine Library

All Alkhatib January 28 at 11:36pm

Quietly speaking out parts of this essay to see how it flows, just realized people walking by were giving me nervous looks. I'm not talking to myself - I'm talking... to no one.

:( — at Gateway Study Center - UC Irvine.

Like · Comment · Promote · Share · Tag Friends

14

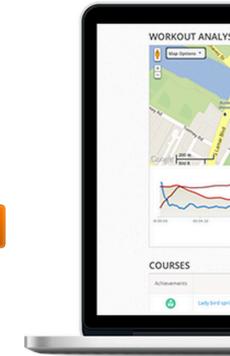
A screenshot of a Facebook post from All Alkhatib at the Gateway Study Center - UC Irvine Library. The post contains a caption about speaking out parts of an essay and noticing nervous looks from passersby.

NAME	OUTCOME
Alcohol Flush Reaction	Does Not Flush
Bitter Taste Perception	Can Taste
Earwax Type	Wet
Eye Color	Likely Brown
Hair Curl ⚡	Slightly Curlier Hair on Average
Lactose Intolerance	Likely Intolerant
Malaria Resistance (Duffy Antigen)	Not Resistant
Male Pattern Baldness ♂	Decreased Odds
Muscle Performance	Likely Sprinter
Non-ABO Blood Groups	See Report
Norovirus Resistance	Not Resistant
Resistance to HIV/AIDS	Not Resistant
Smoking Behavior	Typical

# Findings (cont.)

- Self-awareness
- Analysis vs. capture
- “Aggregate later”
- “Free” data
- Hacking the self

mapmyrun



## FEATURES

Unlimited Mapped Routes  
Unlimited Workouts

# Conclusions

- Data rights
- Visualization
- Empiricism



# Discussion & Further Research

- Quantified Other
- Big Data



# (partial) Acknowledgements

- The Undergraduate Research Opportunities Program
- The Anthropology honors thesis cohort
- Dr. Judith Gregory
- The Evoke Lab
- Dr. Tom Boellstorff

# Questions? Comments?

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