

# workshop introduction

Daniel Jackson · Autodesk, Boston · March 17-18, 2025

introducing  
myself

# my career in buildings



Physics at Oxford



Programmer for Logica UK

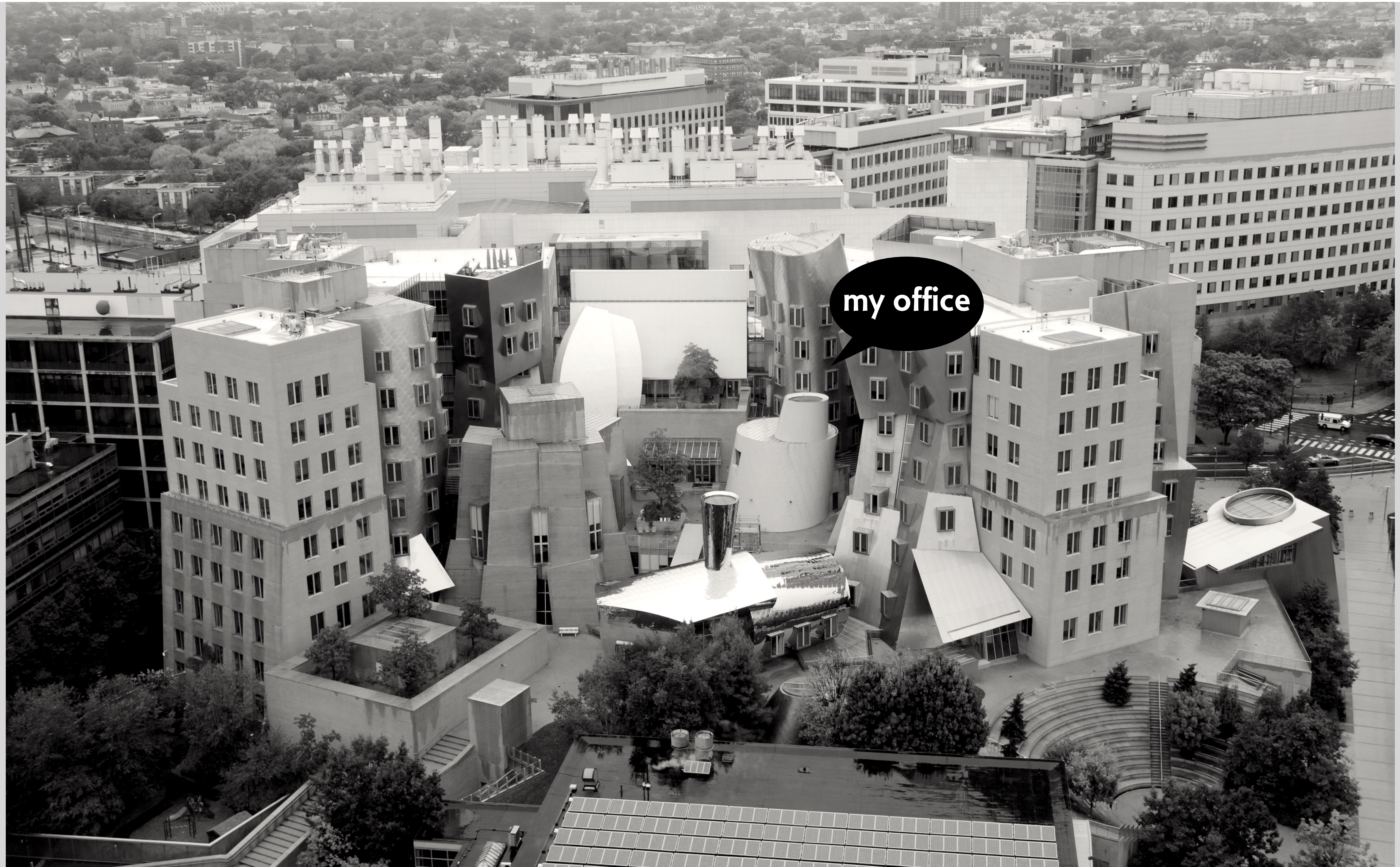


Computer science PhD at MIT

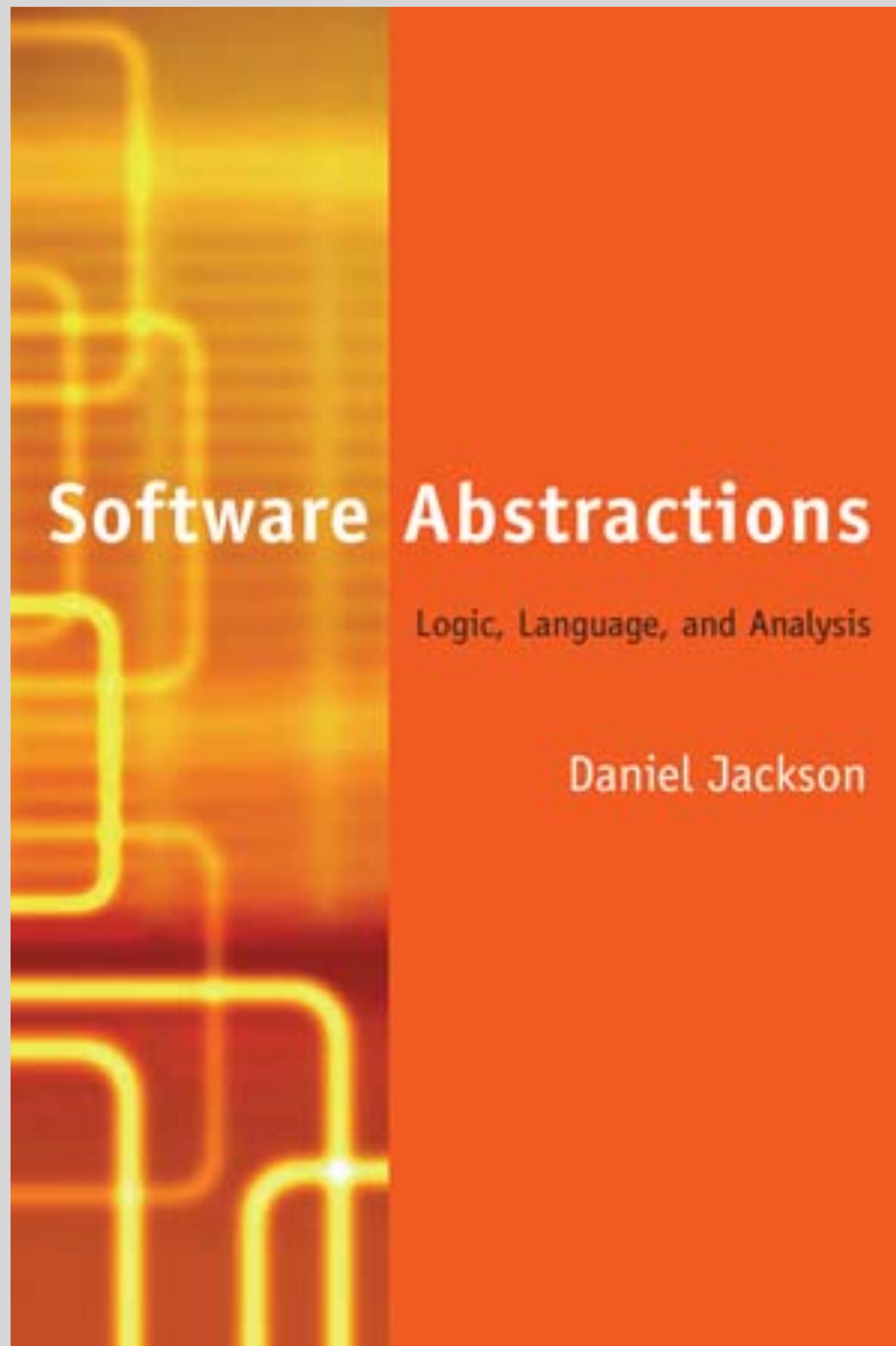


Assistant prof at CMU

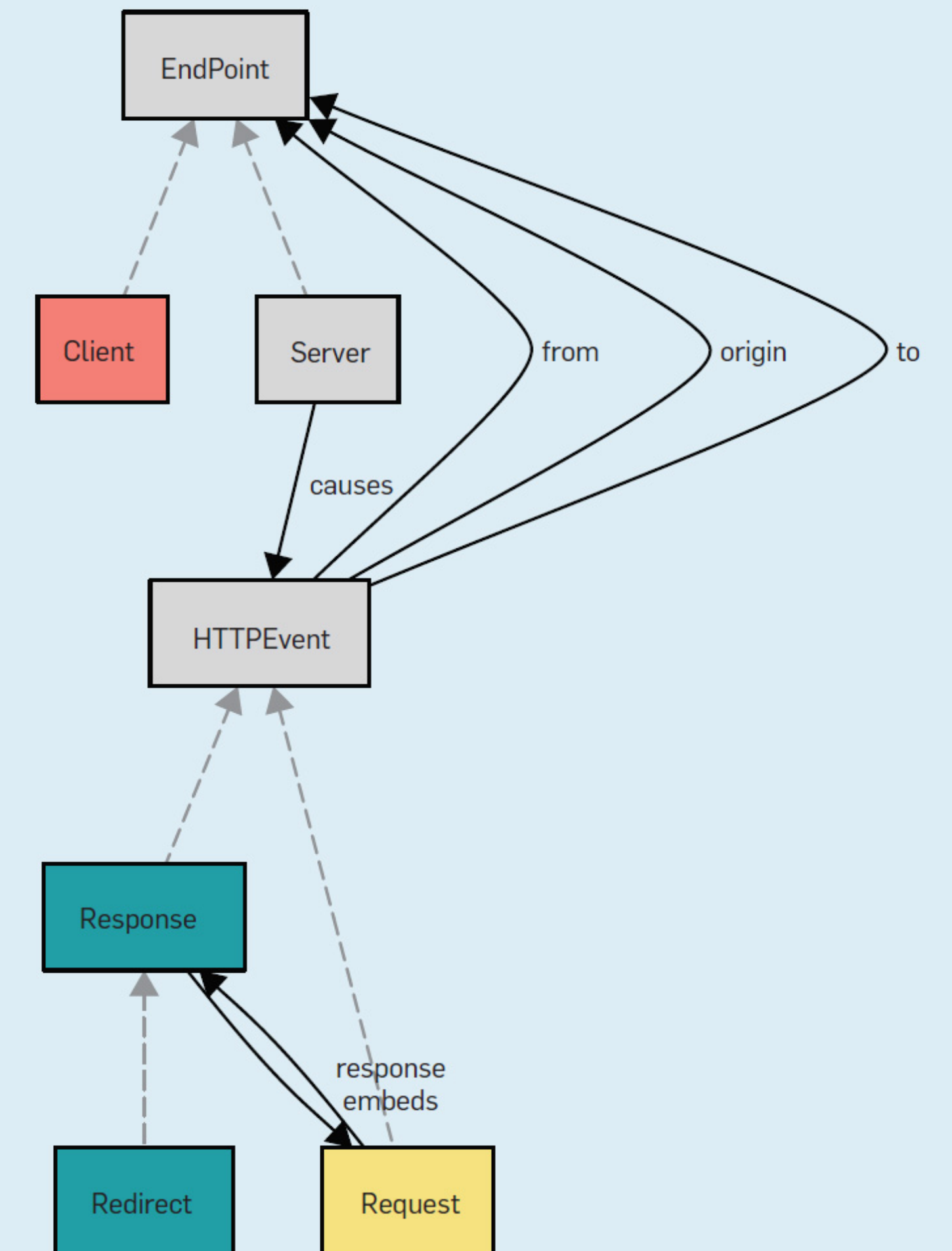
where I work now



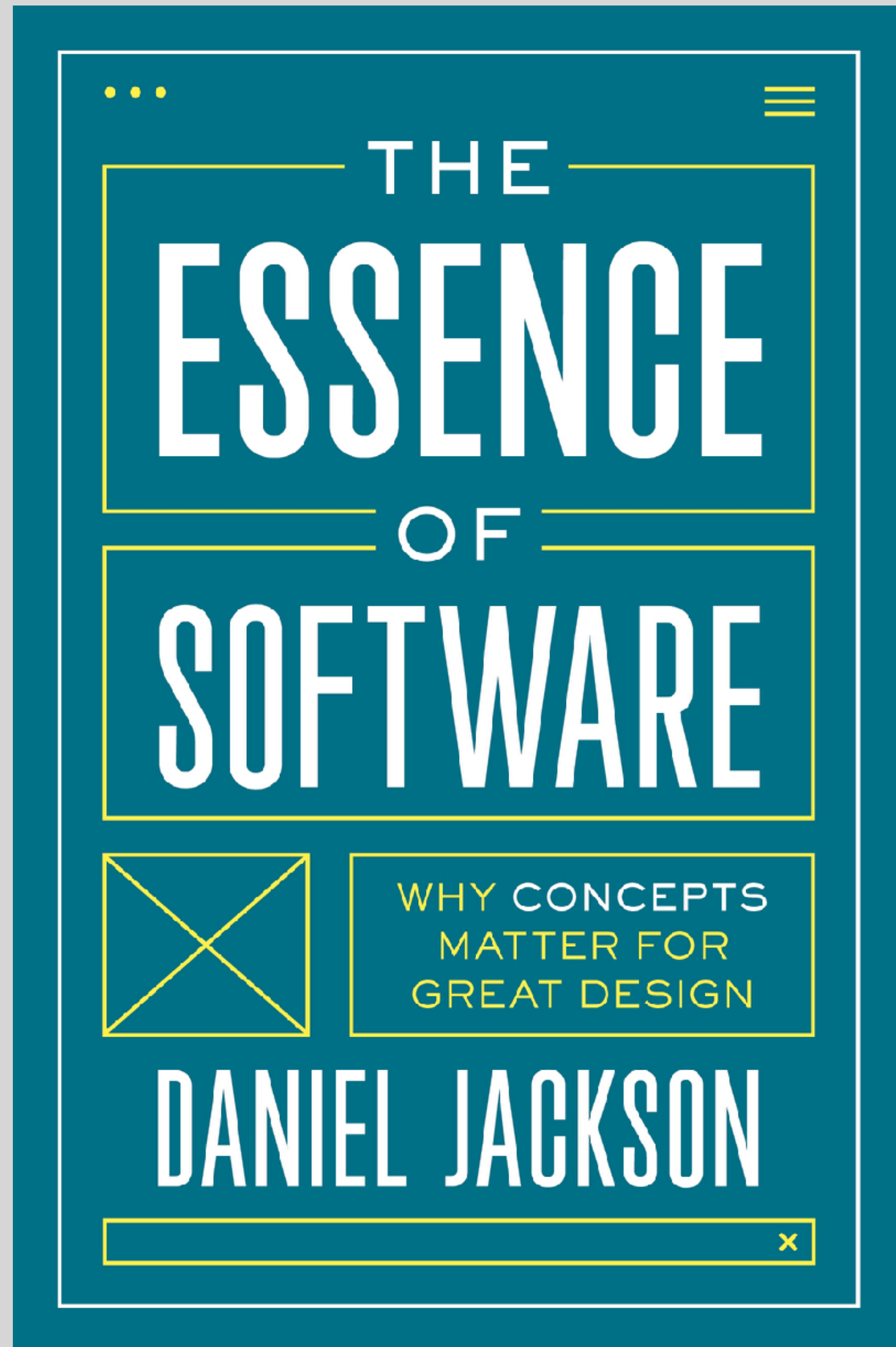
# alloy: a lightweight, analyzable modeling language



```
1  abstract sig EndPoint { }
2  sig Server extends EndPoint {
3    causes: set HTTPEvent
4  }
5  sig Client extends EndPoint { }
6  abstract sig HTTPEvent {
7    from, to, origin: EndPoint
8  }
9  sig Request extends HTTPEvent {
10   response: lone Response
11 }
12 sig Response extends HTTPEvent {
13   embeds: set Request
14 }
15 sig Redirect extends Response {
16 }
```



concepts: a new approach to software design



when I'm not working



workshop  
plans & goals



# Workshop Schedule

Time	Monday	Tuesday
9:00	Welcome & intros	Questions & review
9:30	Introducing concepts	Design moves
10:45	Break	Break
11:00	Identifying concepts	Team vision exercise
12:15	Lunch	Lunch
1:15	Designing concepts	Team integration exercise
2:45	Break	Break
3:00	Design exercise	Presentations
4:30	Reflections	Reflections
5:00	Adjourn	Adjourn

# workshop goals

## **offer you a fresh viewpoint**

find new insights & joy in your work, whatever your role

## **give you a language to articulate design ideas**

capturing and articulating what great designers (already) do

## **support application of concept design at Autodesk**

strategic goal of integration of tools in cloud platform

maintaining simplicity & clarity as function grows even richer

concept catalog as a place to evolve & record design wisdom

## **have fun and learn**

looking forward to our time together & learning a lot from you!

*how about you?*

in one or two words, what do you hope for in this workshop?



in one or two words, what's the biggest software challenge autodesk faces?



*what's next?*

## **introducing concepts**

why do concepts matter?

how can concept design help?

where do concepts come from?

schedule, slides, etc

<https://essenceofsoftware.com/autodesk>



how this  
project began

# a simple task: sign and return

## Field Trip Permission Form

Dear Parents:

Ms. Frizzle will again be taking her second grade class on an exciting field trip. Please sign and return the permission slip below.

Thank you!

Yes, I give permission for my child to go on the second grade "Touch and Feel" trip on Friday February 13th to the NastyCo Nuclear Dump. I understood that my child may encounter the normal risks of childhood play, including grazed knees, hurt feelings and exposure to toxic waste.

*Count Olaf*

Dec 12, 2009

---

Parents signature

Date

# acrobat to the rescue?

The screenshot shows the Adobe Acrobat interface. The 'Tools' menu is open, with 'Advanced Editing' selected, and the 'TouchUp Object Tool' is highlighted. A red circle highlights the 'Sign' button in the top toolbar. A red callout box points to the 'Sign' button with the text 'requires a digital signature'. Below the document, a signature of 'Count Olaf' is visible, with a context menu open showing 'Place Image...' selected. The document text includes: 'Ms. Frizzle exciting f... below.', 'Thank you!', and 'Yes, I give permission for my child to go on the second grade "Touch and Feel" trip on Frizzle's Nuclear Dump. I understood the normal risks of childhood pl... feelings and exposure to tox...'. A separate window titled 'acrobat-sig-paste.txt' shows a list of instructions: '1 how to add a signature in acrobat', '2 -- open document in acrobat', '3 -- Tools-->Advanced Editing-->Touchup Object Tool', '4 -- right click at desired point | Place Image...', '5 then select jpg', '6', '7 how to add date', '8 -- Tools-->Typewriter', '9'.

requires a digital signature

Ms. Frizzle exciting f... below.

Thank you!

Yes, I give permission for my child to go on the second grade "Touch and Feel" trip on Frizzle's Nuclear Dump. I understood the normal risks of childhood pl... feelings and exposure to tox...

Count Olaf

lect All

Parents

Place Image...

Find...

Edit Page...

acrobat-sig-paste.txt

Last Saved: 8/27/09 5:20:28 PM

File Path: ~/Filestore/Advice/computers/acrobat-sig-paste.txt

1 how to add a signature in acrobat

2 -- open document in acrobat

3 -- Tools-->Advanced Editing-->Touchup Object Tool

4 -- right click at desired point | Place Image...

5 then select jpg

6

7 how to add date

8 -- Tools-->Typewriter

9

# i am not alone...



Adobe Acrobat is a family of computer programs developed by Adobe Systems, designed to view, create, manipulate and manage files ... »

**47% Love Acrobat**



[Tweet](#) 1 [g +1](#) +

**207 Positive Opinions** out of 444



Adobe Photoshop is a graphics editing program developed and published by Adobe Systems Incorporated.

**70% Love Photoshop**



[Tweet](#) 87 [g +1](#) +

**30,305 Positive Opinions** out of 43,283



Adobe Photoshop Lightroom is a photography software program developed by Adobe Systems for Mac OS X and Microsoft Windows, designed ... »

**89% Love Lightroom**



[Tweet](#) 3 [g +1](#) +

**2,335 Positive Opinions** out of 2,632



Adobe Acrobat is a family of computer programs developed by Adobe Systems, designed to view, create, manipulate and manage files ... »

**53% Hate Acrobat**



[Tweet](#) 15 [g +1](#) +

**237 Negative Opinions** out of 444



Adobe Photoshop is a graphics editing program developed and published by Adobe Systems Incorporated.

**30% Hate Photoshop**



[Tweet](#) 105 [g +1](#) +

**12,978 Negative Opinions** out of 43,283



Adobe Photoshop Lightroom is a photography software program developed by Adobe Systems for Mac OS X and Microsoft Windows, designed ... »

**11% Hate Lightroom**



[Tweet](#) 5 [g +1](#) +

**297 Negative Opinions** out of 2,632

# what kinds of problems are these?



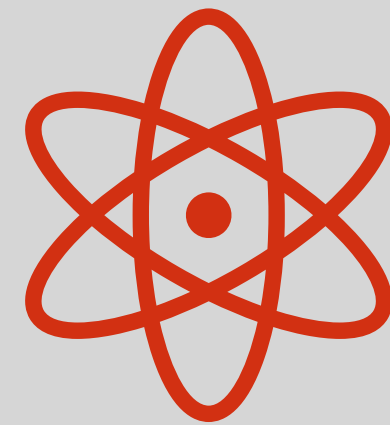
not human errors



not bugs in the code



not UI design flaws



not lack of technology

# if only...

## **we could figure out...**

what makes some apps slick and easy-to-use and some clunky?

why some products take off and others gather dust?

how to design apps to make them flexible, powerful and simple?

## **then we might...**

improve the quality of software & people's lives

know how to design successful products

reduce complexity for users & developers alike