

# workshop introduction

Daniel Jackson · Autodesk · Woodinville, WA · Dec 3-5, 2024

introducing  
myself

# my career in buildings



Physics at Oxford



Programmer for Logica UK

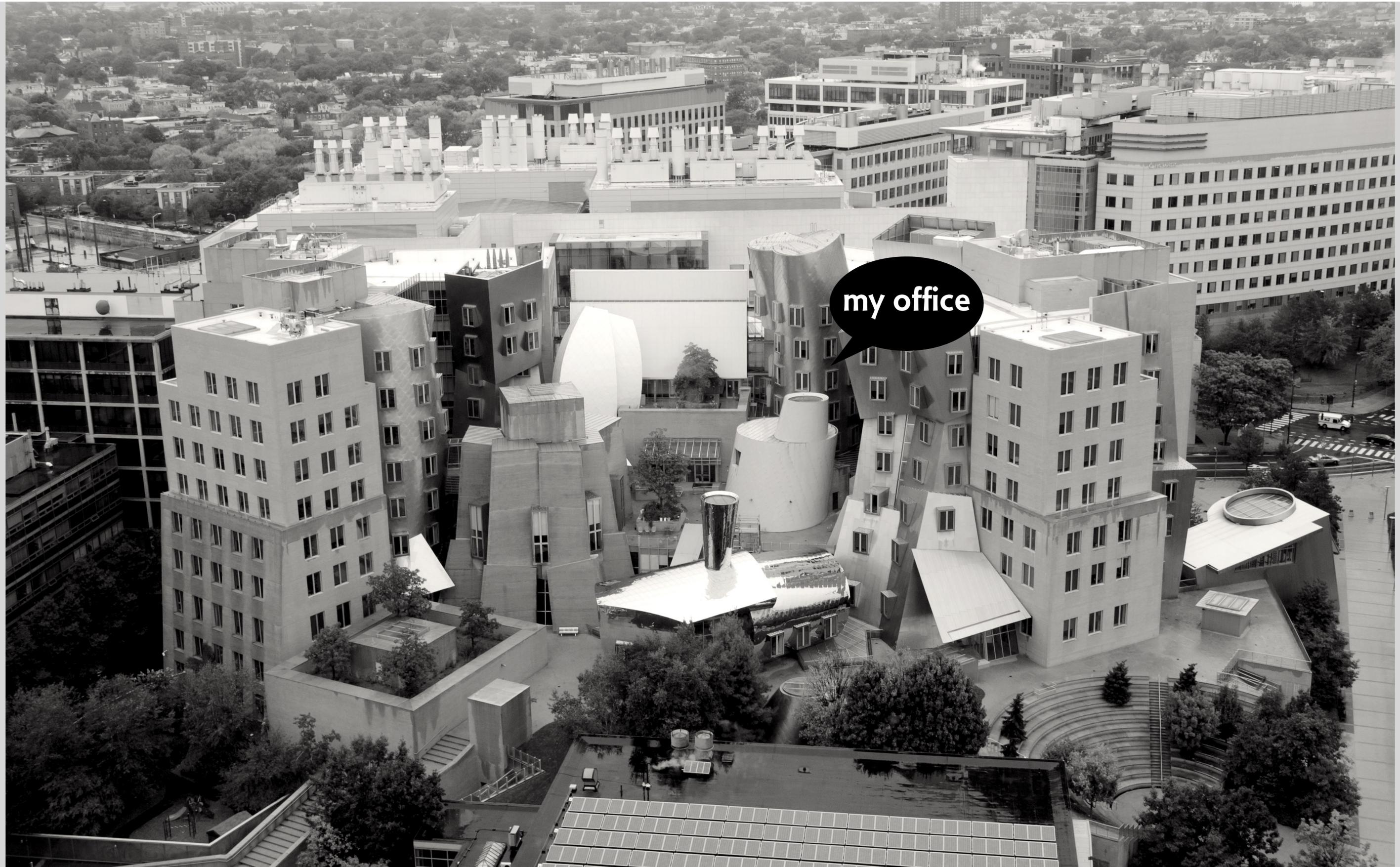


Computer science PhD at MIT

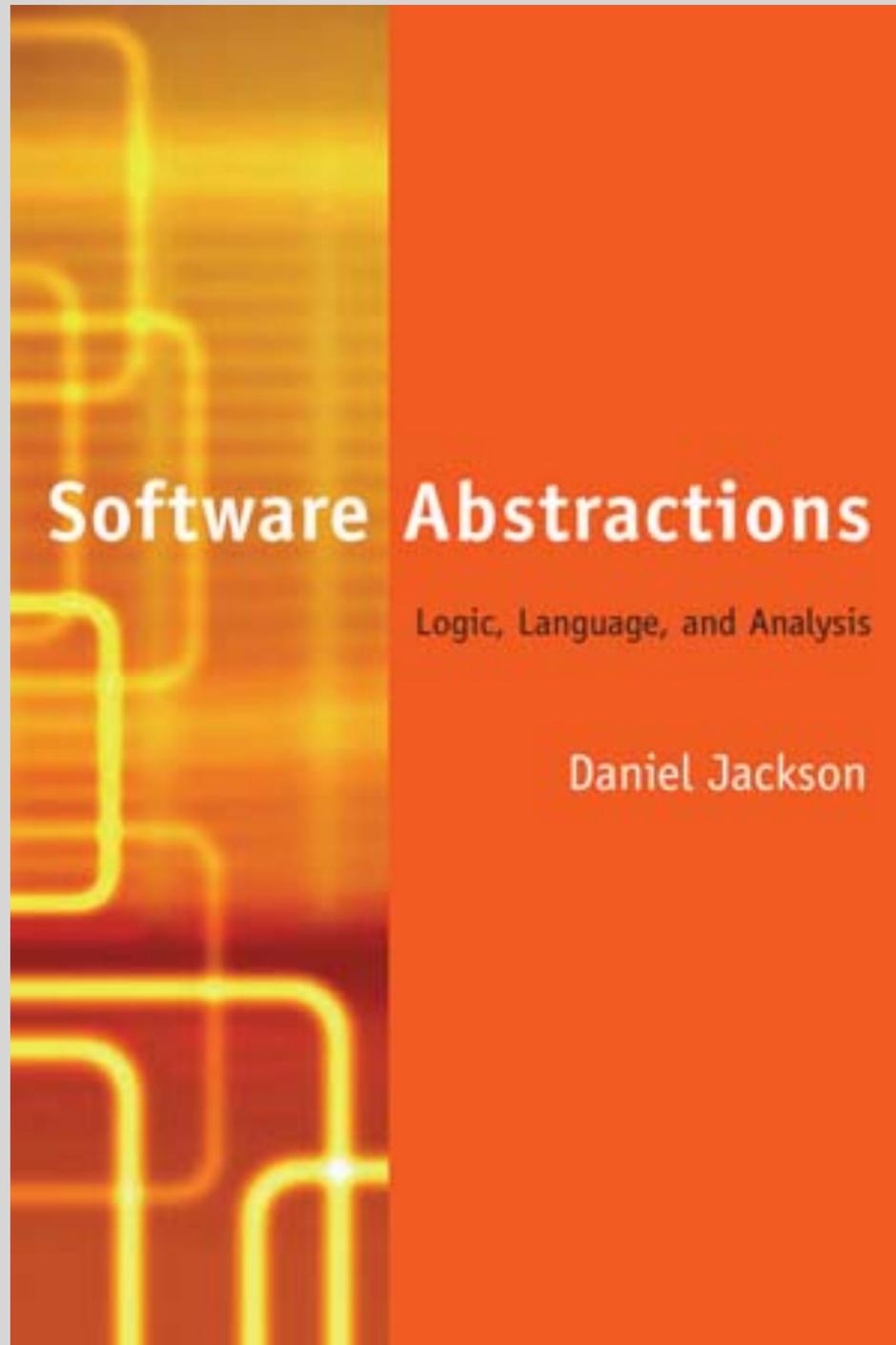


Assistant prof at CMU

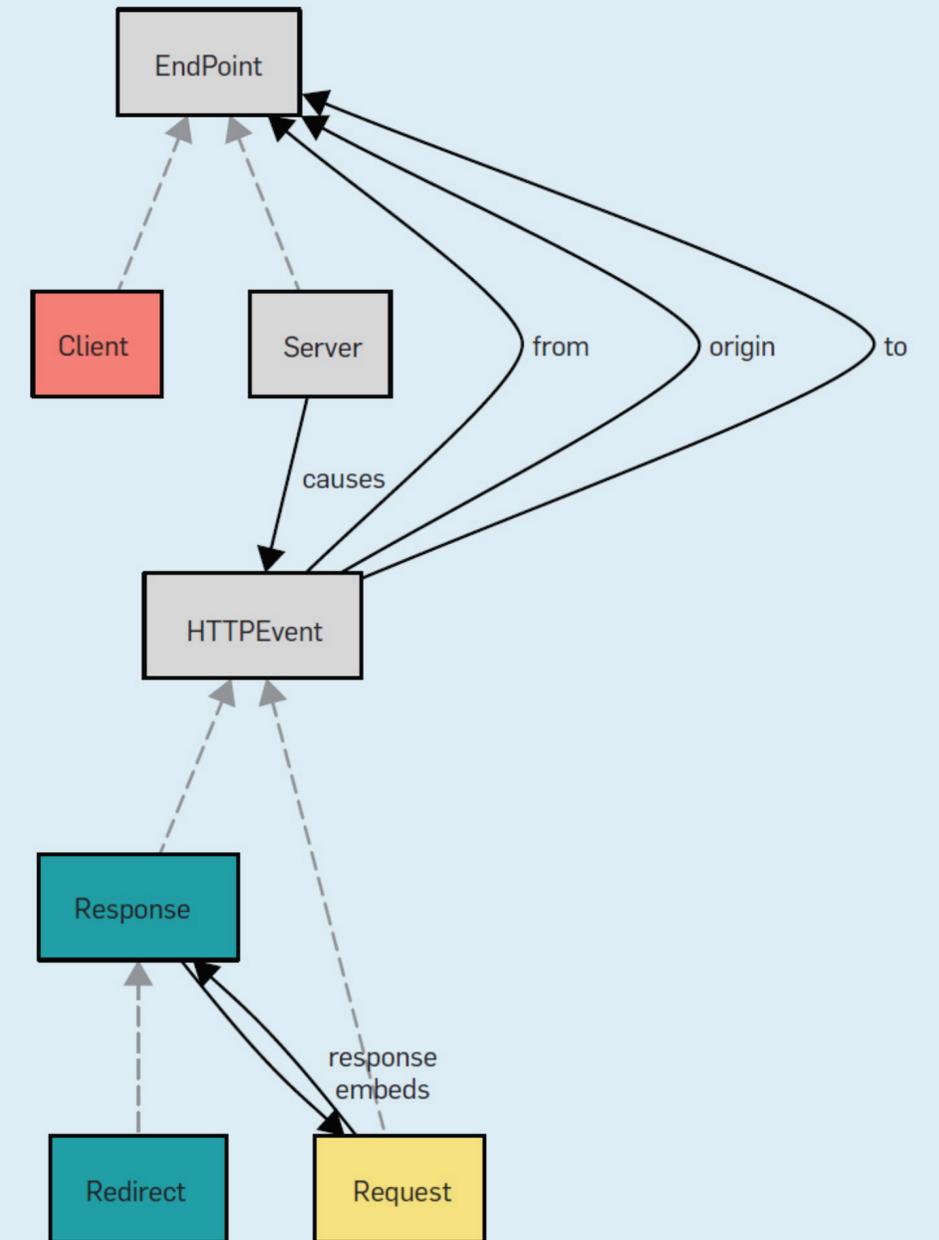
where I work now



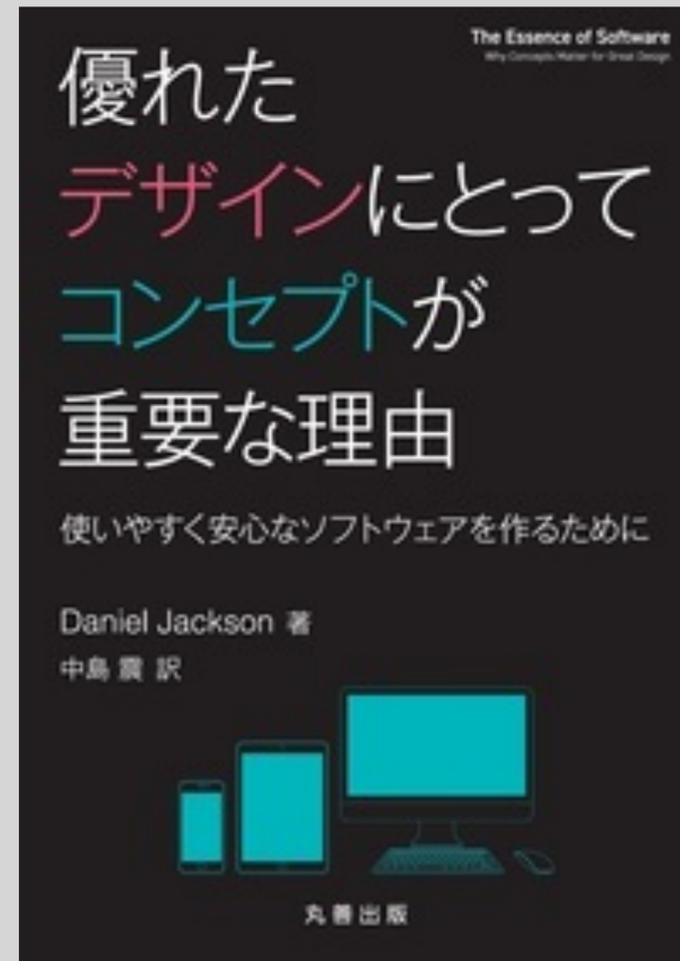
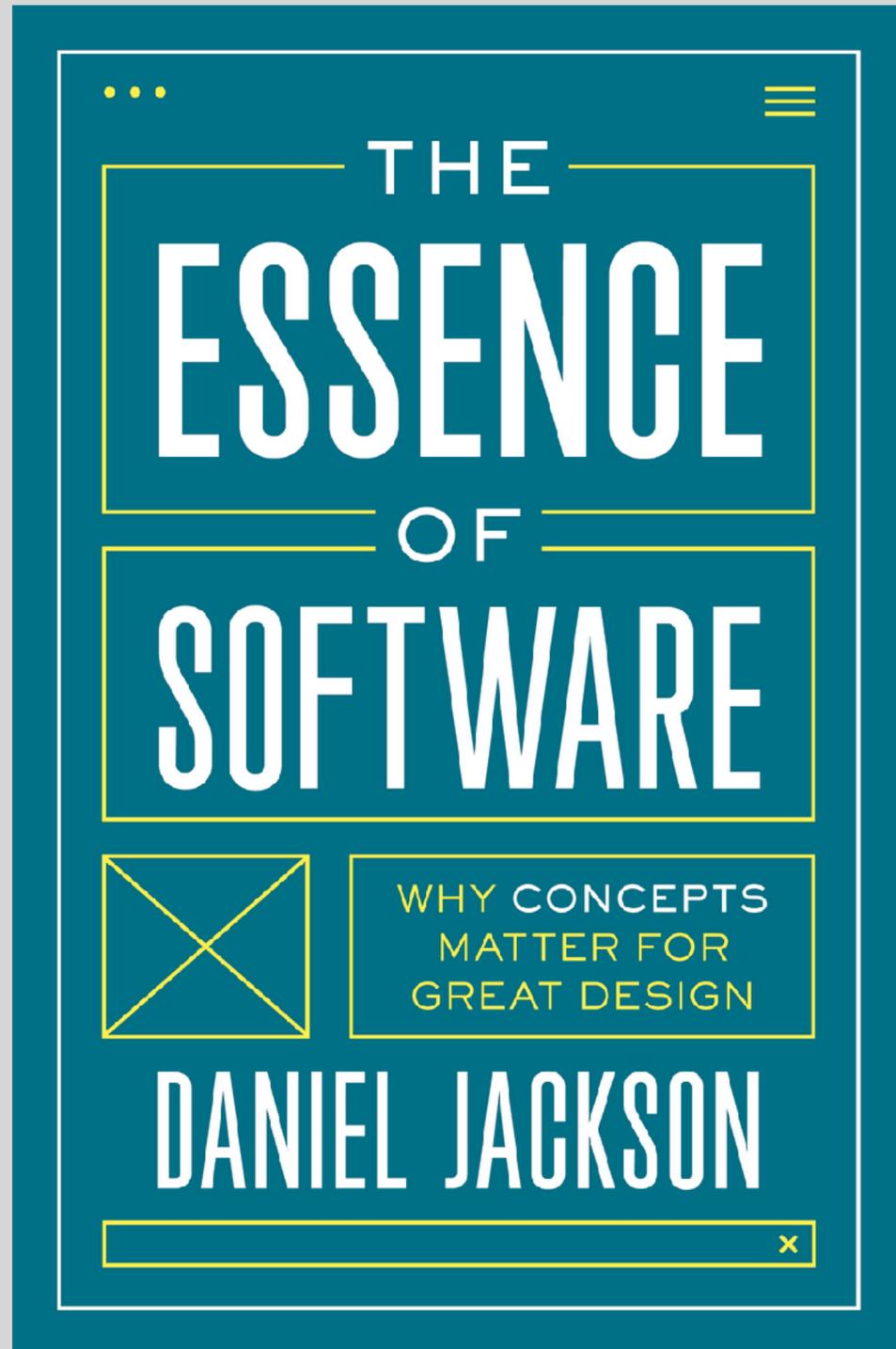
# alloy: a lightweight, analyzable modeling language



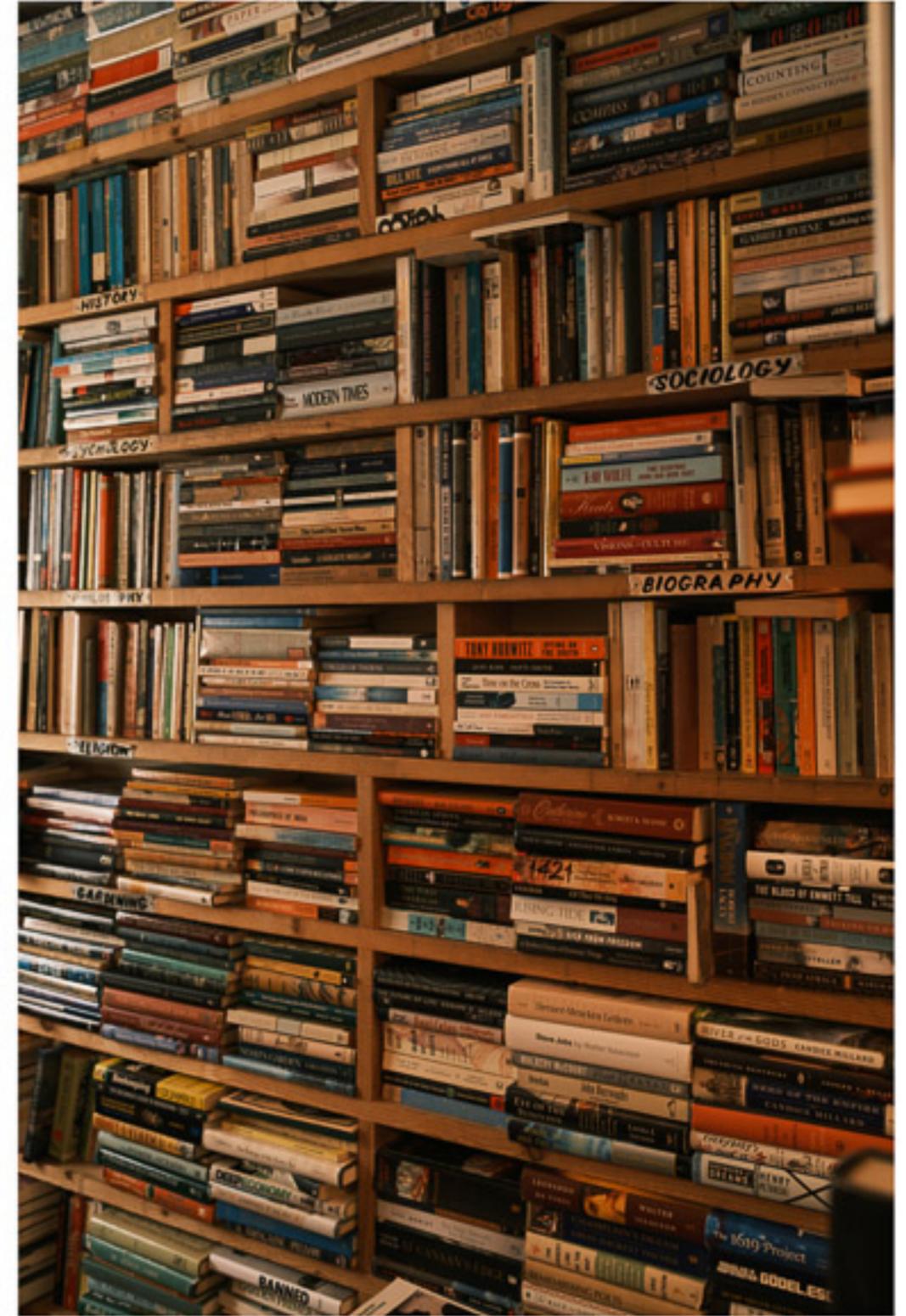
```
1 abstract sig EndPoint { }
2 sig Server extends EndPoint {
3   causes: set HTTPEvent
4 }
5 sig Client extends EndPoint { }
6 abstract sig HTTPEvent {
7   from, to, origin: EndPoint
8 }
9 sig Request extends HTTPEvent {
10  response: lone Response
11 }
12 sig Response extends HTTPEvent {
13  embeds: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



# concepts: a new approach to software design



when I'm not working



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

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Parents signature

Date

# acrobat to the rescue?

The screenshot shows the Adobe Acrobat interface. The 'Tools' menu is open, highlighting 'Advanced Editing' and 'TouchUp Object Tool'. 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 over it showing options like 'Place Image...', 'Find...', and 'Edit Page...'. A separate window titled 'acrobat-sig-paste.txt' is open in the foreground, containing a list of instructions for adding a signature and date in Acrobat.

requires a digital signature

how to add a signature in acrobat  
-- open document in acrobat  
-- Tools-->Advanced Editing-->Touchup Object Tool  
-- right click at desired point | Place Image...  
then select jpg

how to add date  
-- Tools-->Typewriter

# 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**



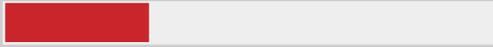
[Tweet](#) 15 [g +1](#) +

**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?



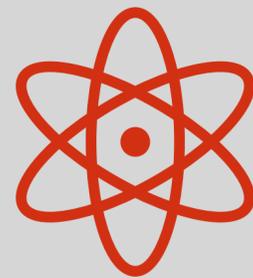
not human errors



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

workshop  
plans & goals

# our schedule

Time	Tuesday	Wednesday	Thursday
<b>9:00</b>	Welcome & intros	Questions from yesterday	Questions from yesterday
<b>9:30</b>	Why software is hard	Disentangling concepts	Team activity: detailed concepts
<b>10:45</b>	Break	Break	Break
<b>11:00</b>	Innovation scenarios	The quintessential design move	TBD
<b>12:15</b>	Discussion	Discussion	Discussion
<b>12:45</b>	Lunch	Lunch	Lunch at 1pm; adjourn
<b>13:45</b>	Designing concepts	Product families & catalogs	Debrief & discussion
<b>15:00</b>	Break	Break	
<b>15:15</b>	Designing syncs	Team activity: initial concepts	
<b>16:30</b>	Review of day	Review of day	
<b>17:00</b>	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**

help you make catalog more valuable & effective

suggest new ways to separate concerns and achieve modularity

focus on data integration and alignment between Revit, Forma, etc

## **have fun and learn!**

looking forward to our time together

and expecting to learn a lot from you

*how about you?*

# 3 questions

**in pairs, tell each other**

what's your role at Autodesk?

what's a recent experience (or book, movie, etc) you'd recommend?

what's a personal goal you have for this workshop?

**then I'll ask each of you to report on your buddy...**

*what's next?*

**what's special about software?**

why's it (mostly) so great?

why do things (sometimes) go wrong?

what tools do we have at hand?

website with slides etc

<https://essenceofsoftware.com/autodesk>