

# Beyond Senior Engineer: How to Think Like an Architect

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Part One: A Day in the Life of a Software Architect

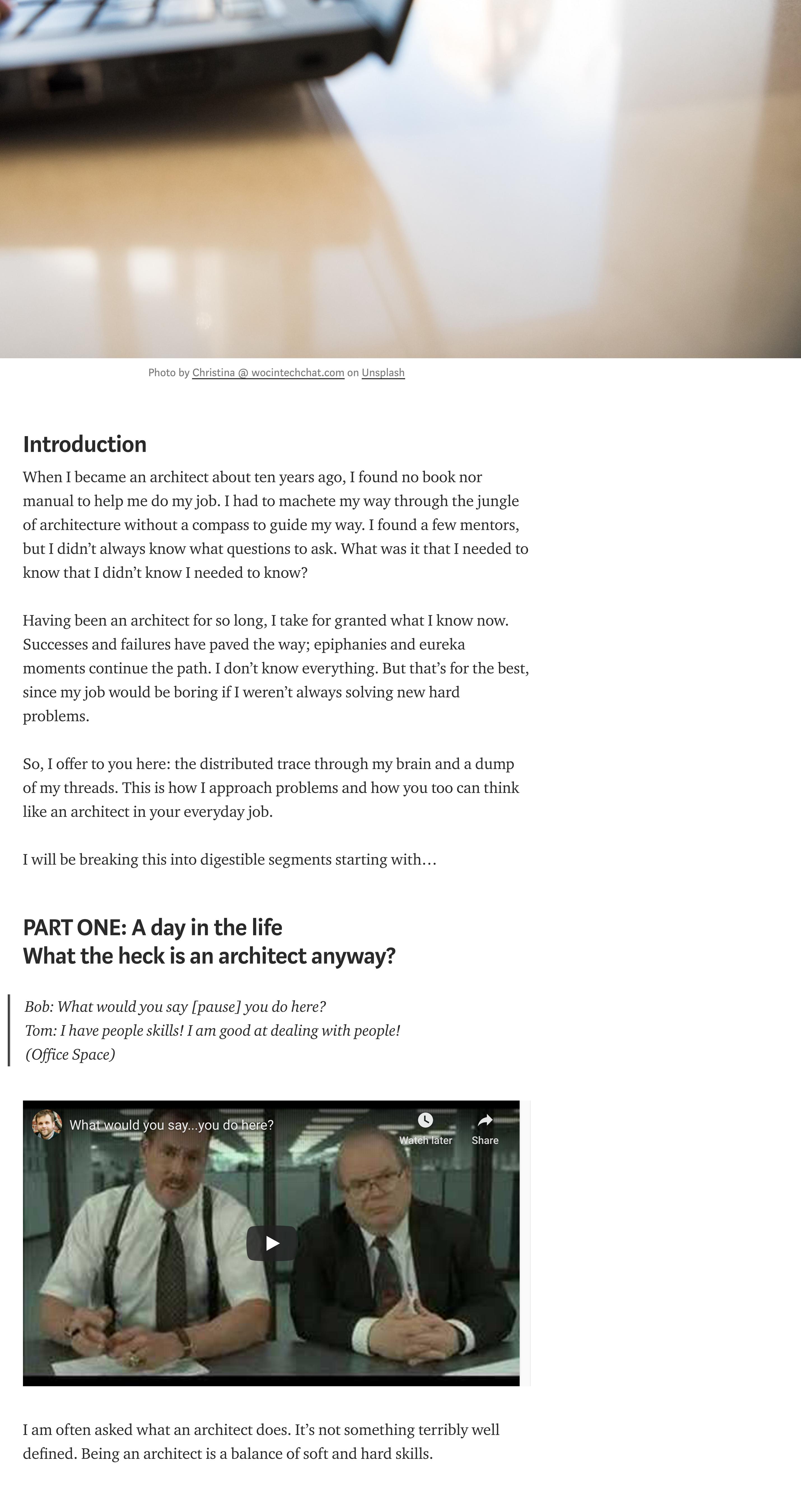


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## Introduction

When I became an architect about ten years ago, I found no book nor manual to help me do my job. I had to machete my way through the jungle of architecture without a compass to guide my way. I found a few mentors, but I didn't always know what questions to ask. What was it that I needed to know that I didn't know I needed to know?

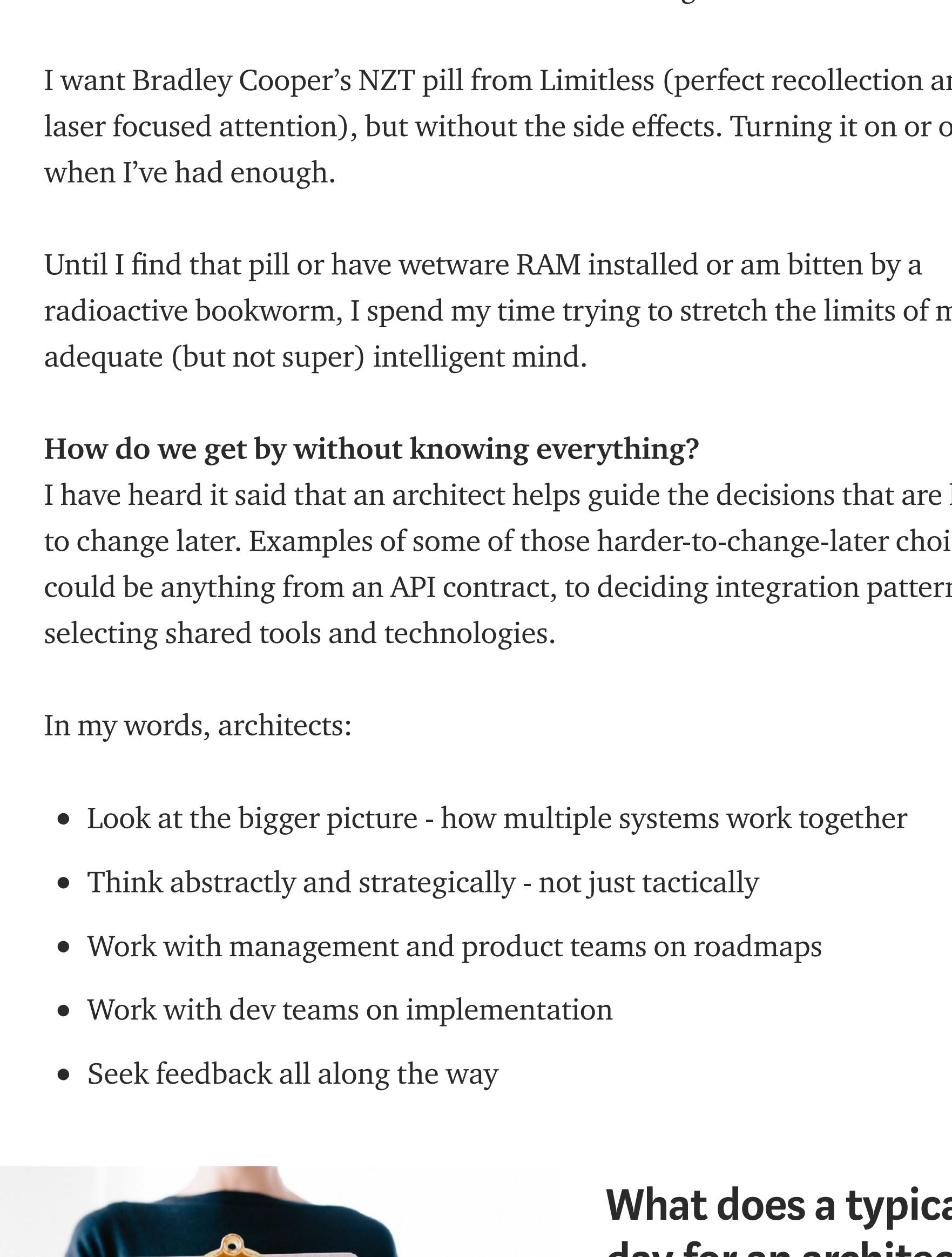
Having been an architect for so long, I take for granted what I know now. Successes and failures have paved the way; epiphanies and eureka moments continue the path. I don't know everything. But that's for the best, since my job would be boring if I weren't always solving new hard problems.

So, I offer to you here: the distributed trace through my brain and a dump of my threads. This is how I approach problems and how you too can think like an architect in your everyday job.

I will be breaking this into digestible segments starting with...

## PART ONE: A day in the life What the heck is an architect anyway?

*Bob: What would you say [pause] you do here?  
Tom: I have people skills! I am good at dealing with people!  
(Office Space)*



I am often asked what an architect does. It's not something terribly well defined. Being an architect is a balance of soft and hard skills.

### Soft Skills

Soft skills are characteristics that need to be honed and practiced.

From a high level, here are ubiquitous roles and behaviors that I think make a good architect:

- Question asker
- Researcher
- Mentor
- Partner
- Advisor
- Problem solver
- Creative thinker
- Thought leader / influencer
- Listener
- Learner
- Designer
- Writer

These four areas stand out to me as specific areas of focus:

#### Communicate clearly

This includes written communication, speaking, and active listening. You will need to convey technical ideas to non-technical folks and vice versa. I personally was not born a natural orator. The introvert in me stumbled and mumbled many times when presenting to a group.

#### Learn from past mistakes and successes

We all make mistakes; I know I have. If you haven't broken something in prod, then you probably aren't making changes in prod. We all have more successes than mistakes. Revel in those moments, commit them to memory and share them with others.

#### Facilitate

Lead a working group or discussion. Maybe create your own Community of Practice or lead a lunch and learn.

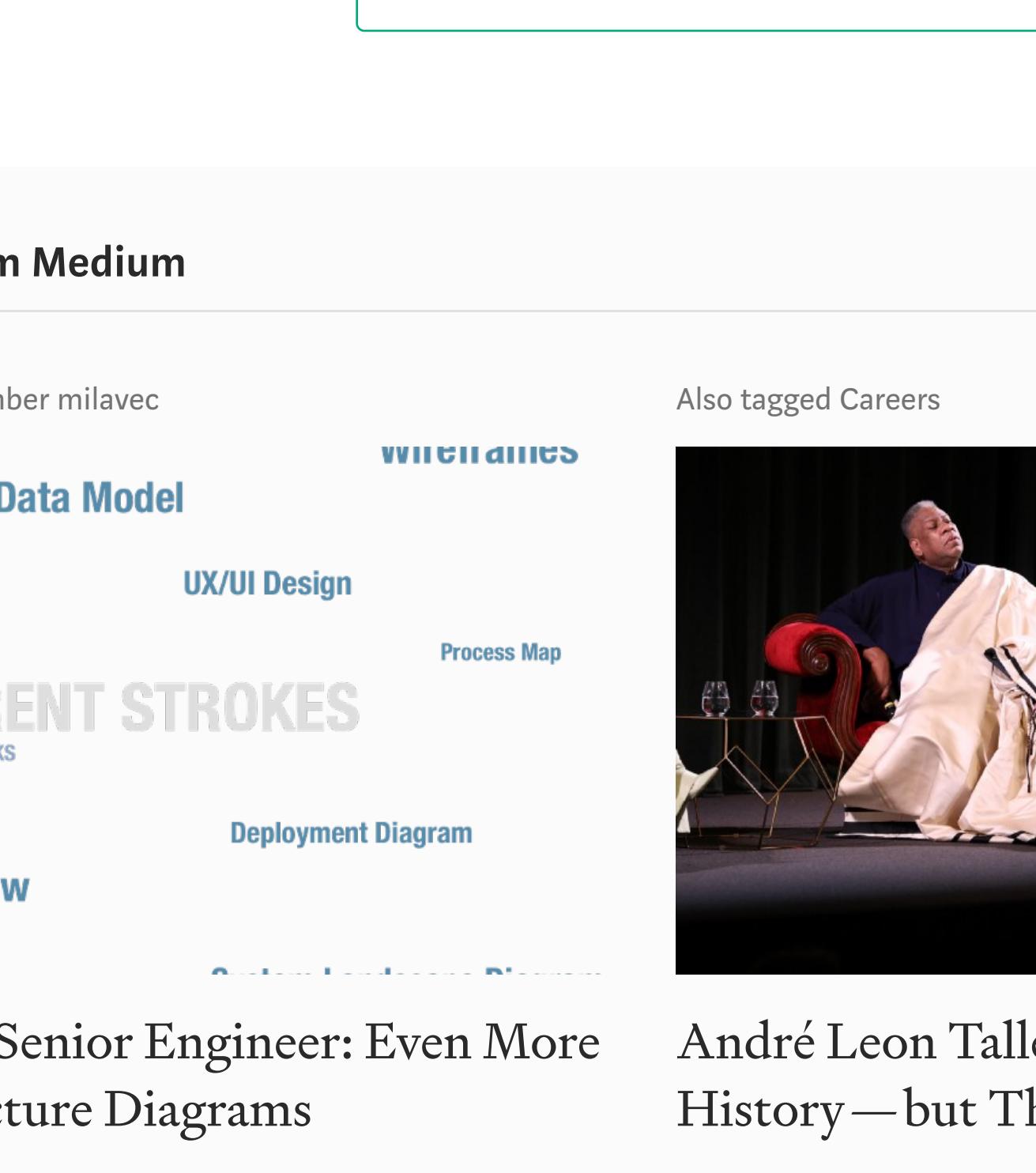
#### Stay open-minded

You might miss out on something clever and novel if you're closed to hearing new ideas or learning new technologies.

### Hard Skills

Hard skills are what you have built up while working as an engineer or hands-on technologist and should continue to develop:

- Keep up to date on new technology
- Understand common patterns and when to use them
- Find the right tool for the job
- Keep your hands dirty



## "Architects have to know everything"

Unfortunately, architects are not omniscient. I often wish I knew everything about everything. If we could be granted one super power, mine would not be a traditional one - flight, extreme strength, or invisibility. What I want is something I believe to be more powerful: flexible super-intelligence!

I want Bradley Cooper's NZT pill from Limitless (perfect recollection and laser focused attention), but without the side effects. Turning it on or off when I've had enough.

Until I find that pill or have wetware RAM installed or am bitten by a radioactive bookworm, I spend my time trying to stretch the limits of my adequate (but not super) intelligent mind.

#### How do we get by without knowing everything?

I have heard it said that an architect helps guide the decisions that are hard to change later. Examples of some of those harder-to-change-later choices could be anything from an API contract, to deciding integration patterns, to selecting shared tools and technologies.

In my words, architects:

- Look at the bigger picture - how multiple systems work together
- Think abstractly and strategically - not just tactically
- Work with management and product teams on roadmaps
- Work with dev teams on implementation
- Seek feedback all along the way

## What does a typical day for an architect look like?

That is not a very quick and easy answer because no two days are alike. I surveyed architects on a Friday afternoon and here are the answers I received:

- "I just did a final alignment with all the potential vendors."
- "I was doing a diagram for [a product director] as to different approaches for [project X]. It will be reviewed by [leadership] to make a decision."
- "Standing up AWS infrastructure."
- "I am at a meeting learning about the new CI/CD pipelines."
- "I am creating a system diagram for a new administration tool."
- "Reading the latest oauth2 standards draft at <https://tools.ietf.org/html/draft-ietf-oauth-token-exchange-16>"
- "Catching up on Slack and email. And making sure my meetings aren't double/triple booked next week."

And me: "I am writing this article, of course" (so very meta).

As you can see, we are all over the place and there is no real typical day.

We all tend to have a lot more meetings than engineers — your usual splattering of scrum ceremonies, interviews, brainstorming sessions, and information gathering.

When not in meetings, I do research and documentation, write POCs. I help with troubleshooting production issues, review pull requests, and even run brown bags or workshops every now and then.

The lack of routine is a trade-off: I am never bored, but context shifting and managing multiple work streams for many teams is demanding. But honestly, there isn't any other job I'd rather have (except professional roller coaster rider, but I haven't seen any openings for that).



## Conclusion

Just like software engineers, every architect has their expertise and focus, and every company is a little different.

While there is no "typical day", these general skills are what's needed to be successful.

In future parts, I will dig deeper on topics such as common architectural patterns, approaching hard problems, and creating robust designs.

Continue to Part 2:



<https://medium.com/@admilavec/beyond-senior-engineer-part-two-1f70c39ab383>

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