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## APIs

#### How To Build An API

The way I describe APIs to my dad is "They're how computers talk to other computers." A simple concept, to be sure, but in my experience there's a lot people get wrong, even if they've been building APIs for years.

In this talk, I'll take things back to basics, and show you how to build an API that's fast, extensible, and maintainable.

#### Scaling Your API

People are actually using your API! Great! Except... now you're realizing the problems that success can bring. In this talk, I'll explain the most common causes of API scaling problems, and what you can do to fix them.

#### **Explaining Your API To Users**

When was the last time you used an API correctly on the first try? I'm honestly still waiting. But there are ways that good design and documentation practices can make things easier on your users, and in this talk, I'll tell you what they are.

#### API Security, So You Don't Get Fired

A quandary: You want to keep control of your data, but other people want to steal it. How do you stop them? In this talk, I'll explain how easy it can be to set up proper authentication, proper access control, and proper storage. You'll just have to find some other way of meeting Troy Hunt.

## API Response Codes Are Weird. Let's Learn About The Weirdest Ones.

When I was building my first API from scratch, I was given free rein to have it return any status codes I wanted, as long as they made sense and were documented. So I looked up the list of valid ones, and... man, there are some weird and obscure HTTP status codes. Let's learn about them!

#### **REST vs GraphQL**

Everybody likes a good REST API, but there's a new challenger in town, promising both better performance and easier use. In this talk, I'll explain to you the problems with REST, how GraphQL solves them, and whether or not you should switch. There will be examples, and I'll take questions as well.

## **Software Testing**

#### Do The Robot, with Automated Testing

"It is a truth universally acknowledged that a developer in possession of a good testing plan must be in want of a way to not have to run it manually every single time."

Seriously, if you had to run every single regression test in your suite by hand every time you checked in new code, you'd never have time to write code to check in.

So a plethora of tools have emerged to abstract away this mind-numbing task, including GUI tools like Selenium, unit testing tools like PHPUnit, and a few extras to plug any gaps.

In this talk, I'll introduce you to why you should automate your tests, how you can automate your tests, any problems you might run into along the way, and how to solve them.

It's time to make these lazy computers earn their keep.

#### Alright, Alright, I'll Try TDD, Shut Up Already

Everybody knows you should test your code. There are blog posts, webinars, and insistent conference talks like this one. But why is everybody so fired up about TDD? Is it really THAT good, that life-changing?

In a word: yes. Coming from the perspective of a former testing skeptic, this talk will explain to you why testing is so important, how easy it can be to integrate into your existing workflows, and the benefits you'll get.

Unfortunately, after watching this talk, you will become one of "those" people. Sorry.

#### BDD Is Better Than TDD, And I Can't Prove It

That's the problem with subjective arguments: They're too subjective. But BDD certainly has some advantages of TDD that I think are really convincing. In this talk, I'll tell you what they are, and how you can introduce some BDD practices into your existing TDD setup.

# Climb The Testing Ladder, From Unit To Integration To Acceptance

It's likely you've been testing your software all along, but just didn't know it. In this talk, I'll tell you how to formalize your testing process, so you can replicate it over time and know you didn't miss anything.

## Information Security

#### How To Use OWASP ASVS To Implement A Corporate InfoSec Plan

Checklists get a bad rap in security. They're viewed as bureaucratic, and not flexible enough to each application's special needs. Well, my memory sucks, so I need a checklist to make sure I'm not forgetting anything when I'm coding a new project. Process is not the enemy. Process as concealment of incompetence is.

In this talk, I'll describe how I used the OWASP ASVS to create a corporate information security policy from scratch. It's comprehensive, replicable and understandable across departments, and received buyin even from non-technical stakeholders. It was a great success, and I can tell you how to do it in your company too.

#### The Triumvirate Of Terror: SQL Injection, XSS, and CSRF

Every week, a new and dangerous vulnerability rears its head. But most of us will never be important enough to be worth burning a zero-day on (sorry), so it behooves us to focus on the flaws that are actually being exploited in our companies.

That means going all the way back to the beginning, and asking ourselves: Are our inputs validated? Are our outputs sanitized? And are there any easy ways of bypassing our site's authentication process? Only once we've laid some solid groundwork does it make sense to focus on fancier things.

#### **Privacy Is Not Dead**

To admit defeat is to give up the hope of future progress. In this talk, I discuss ways in which any person with sufficient interest can make their life more secure, and tell the world that they value their rights, and won't give them up without a fight.

# Death To JavaScript: The Surprisingly Bearable Lightness Of Browsing Script-Free

Modern websites suck. They blare noise at you, take over your screen with ads, and beg for permission to locate you, notify you, steal your first born. It doesn't have to be this way.

Nobody believes me when I tell them that you can turn off 80% of the code running on most websites and not lose any functionality. So in this talk, I'll prove it to you. You deserve to decide what runs on your computer.

### WordPress

#### Weird And Wonderful WordPress Functions

WordPress has been a part of all of our lives for over fifteen years now. And in that time, it's accumulated some, ahem, eccentricities. In this talk, you'll take a journey with me into the depths of the WordPress codebase, a land of myth and intrigue, where code written last week lives alongside code older than Millie Bobby Brown.

#### The WordPress Database Schema: A Deep Dive

We all use the WordPress database every day, but how much do you actually know about the tables and relationships that make up your site? In this talk, I'll walk you through the schema table by table, showing you why things are structured the way they are, and how this knowledge can make you a better user and/or developer.

#### Secure Plugin Development, So Your Users Won't Hate You

I guarantee that while you're reading this, someone somewhere is cursing the name of the developer who made the plugin that is currently exposing their WordPress site to attack. You don't want to be that developer, right?

This talk will show you proper practices for secure development, forged in the fires of experience. It only takes one mistake to learn not to do something, but why not try and make it zero?

#### WP-CLI Will Make Your Job Easier And Your Work Better

I love command prompts. I try to spend as much time as possible in them. So obviously, I'm a big fan of WP-CLI. In this talk, I'll try to make you a fan too.

## Databases

#### SQL For People Who Know Literally No SQL

Databases are cool. Or at least, having the ability to fetch quick, accurate data on demand is. In this talk, I will go over the basics of SQL, so you can write your own queries and get answers to your questions.

#### Performance, Maintainability, Accuracy, Pick Any Three: Designing A Database

Databases don't like change. Once things are set and have been running in production for a while, modifications become very difficult to perform without running a considerable risk of failure. That's why ensuring that things are designed correctly the first time is so essential.

In this talk, I'll go over the basics of relational database design: creating tables, deciding what data should go where, and assigning keys and relationships. These can be simple tasks, if they're tackled early enough, and with enough fastidiousness. Before you know it, you'll have a database that just blends into the background of your app, letting you focus on other things.

#### Which NoSQL Should I Pick? Should I Pick It At All?

I often get asked what the difference between SQL and NoSQL is. The tricky thing is that NoSQL isn't a single technology. Instead, it's a group, and beyond that, it's a group defined by what it isn't, not by what it is. So that makes direct comparisons hard.

What I'll do in this talk is break down the major categories of NoSQL databases (key/value, document, graph, etc), explain their strengths and weaknesses, and provide some sample use cases. After that, the choice is up to you.

## Data Analysis / Data Science

#### Make Your Data Analysis OSEMN

There are a lot of buzzwords and complicated processes around data analysis. But at its core, you're conducting a research project, and that means you can establish a process, follow it, and hopefully get replicable results.

In this talk, I'll describe the OSEMN model, which stands for Obtain, Scrub, Explore, Model, iNterpret. Hey, I didn't name it, they set the rules. It's a great way of putting some structure around your data analysis process, so you don't get lost in the noise.

#### Matomo: It's Like Google Analytics, But With Privacy

Do you run Google Analytics on your site? Probably – depending on whose stats you believe, it's running on anywhere from 50-66% of the web. That's a lot of power to give to one company for free. Are you sure you want to do that?

If you don't think Google should have access to your company's data for free, why not try Matomo? It's just as free, and has the benefits of being open-source (no hidden goblins) and self-hosted (so you get access to the real data, not just Google's summaries of your data).

Stephen Smith

You can have reliable, actionable intelligence without giving away your users' privacy. Come to my talk and find out how.

#### **Mental Health**

#### Autism At Work: The Pros And Cons

I have Level 1 Autism Spectrum Disorder, and it's been an interesting life. Come to my talk, and find out what I think the benefits and downsides are, and how I've dealt with them. Or don't – one offshoot of ASD is that I don't hunger for social approval. And I also say things that maybe I shouldn't.

#### **Dealing With Anxiety: What Worked For Me**

First off, I'm not a doctor, please see a doctor. But if you've been dealing with anxiety at work, and/or anxiety in your everyday life, it might be helpful to hear someone else's story. I know that I've picked up a few things along my decade with Generalized Anxiety Disorder that I'd be happy to share.

## Non-Technical / Soft Skills

## How Cupcakes, Mashed Potatoes, And MythBusters Made Me A Better Developer

I like being in my kitchen, and I like to watch MythBusters. In this talk, I'll show you how those two things made me a better developer, from creating good processes to learning from failure.

#### Managing Money As A Developer

You know, we in the tech industry make pretty good money. But no matter how much water you pour into a bucket, having a hole in the bottom will still drain it every time. In this talk, I'll blend together my dual backgrounds in finance and technology to show you how to make the most of your money, so it works for you instead of being a weight around your neck.

#### How To Sell Your Ideas To Your Boss

I know your ideas are great. But your boss is the one you have to convince, and often they have very different priorities than you. In this talk, I'll show you how to translate your technical ideas into business plans, put things in dollars, and win over non-technical stakeholders to your way of thinking.

#### How To Ditch Social Media And Refocus Your Life

Almost ten years ago, I left Facebook. And about five years ago, I left Twitter. In this talk, I'll describe to you why I did it, what I filled my time with instead, and why you might want to consider some changes in your life as well. We only have so much time – why not make it count?

#### **Adventures In Bodging**

To "bodge" is to make do with what materials lay at hand. In my past, I've created many technical bodges, whether it's stitching together APIs that were never meant to intersect, or creating tiny tools that made my life easier or solved a technical problem that for some reason didn't already have a solution.

Come on out to my talk and learn how bodging can work for you too - I'm not advocating it as a permanent strategy, but often you'd be surprised how far you can get with a couple of common tools and some ingenuity.

#### **Building A Portfolio The Nerd Way**

When I was creating my portfolio, I ran into a problem: I'm terrible at front-end web development, and think WordPress/Wix/Squarespace are all overkill for one simple static page.

So what did I do? I made the simplest portfolio I could think of, using tools I already knew how to use, like AWS, scp, and nano. Come on out to my talk, you might leave finally knowing how you want your own portfolio to look.

#### How To Speak At A Conference

This is a very meta talk. I'm aware of that. But before I started speaking at conferences, I was sitting in the audience at them, thinking *"I could do better than that!"* 

This talk is the story of how I went from Point A (sitting in the audience) to Point B (up on stage).