

# SHORT TECHNICAL LECTURES CATALOG



**SPARKING YOUR AGILITY  
AND TECHNICAL  
EXCELLENCE!**



Platinum  
Solution Partner





## WHO ARE WE?

We are a boutique company that strives to help our customers become more efficient and effective by providing the right technical solutions, guidance, and development fire power, exactly when and where they are needed.

We specialize in the following areas:

- Back-end development – Enterprise application development and architecture - using Java, C#, Spring, Scala, NoSQL.
- Web and Front-end development and architecture - using React, Angular, Vue, Node.js, and Typescript with performance and maintainability in mind.
- DevOps – building and supporting CI/CD pipelines and Cloud, using modern technologies such as Docker, Ansible, Kubernetes, and Istio.
- Testing and automation – building automated testing systems for Web, mobile, and APIs using the latest tools and technologies.
- Engineering practices - helping engineers produce code in an Agile way while “fighting” technical debt and creating a culture of speed and excellence: TDD, Unit testing and test automation, Refactoring, Breaking monoliths.

## WHY CHOOSE US?

Experience, experience, experience. Founded in 2008.

**We understand Development and Operations of software.** From the processes level (Agile, Lean, DevOps), to testing strategies, clean coding, emerging architectures, all the way to coding standards and automation.

**We specialize in solving hard problems** and provide hands-on experts to work with your teams, coach them and help them achieve their goals quickly.

**We understand your needs.** By getting into the picture and understanding your unique context, we can quickly provide a matching solution.

**We are easy to work with!** Quick and efficient administration. Speedy response time. Accurate and flexible solutions.



## WHAT OUR CLIENTS HAVE TO SAY?



### AgileSparks

Excellent



#### ■ **Excellent class.**

Highly recommended. - Very thorough Very well organized. Excellent 4-day class that was full of useful material.

■ **Yaki Koren was a great instructor** and he explained the material thoroughly. I would have liked some kind of summary on the 'how to's with a systematic overview because doing it while the practical lesson is taking place is challenging.

#### ■ **Good and comprehensive course.**

Moti was professional, knows perfectly the material. He was attentive to the needs of the people.

All main subjects and knowledge were transferred and people gave good feedback and felt they gained knowledge.

A lot of added value from Moti himself beside the material of the course.

#### ■ **Precise Content, well delivered.**

The content was precise, well delivered. The session was very interactive with sufficient videos and quiz.

■ **It was a very nice course,** Moti was an excellent tutor.

#### ■ **Best. Class. Ever.**

Excellent instructors, excellent conversations, excellent learning!

■ **Great experience** with a good mix of theory, practice and Q&A's.

#### ■ **Fantastic class.**

Being all remote was a smooth experience.

■ **Knowledgeable and dedicated** to the training and everything was perfect.


■ **Very informative!** Very good teacher!

■ **Nice course,** got the basics of k8s.

■ **Great trainers!!!**  
Engage and able to answer at all participants questions.

■ **Kubernetes course by Agile sparks**  
Kubernetes course held by Moti was really great. It seems that Moti really controls the material extremely well. The topics in the course were exactly what I needed to get my started with Kubernetes ...

■ **The course** was very good.



AgileSparks' technical lectures series includes talks on a variety of subjects.

The goal of these talks is to introduce advanced and cutting-edge technologies in a practical way such that the audience can apply the ideas and practices in their day-to-day work. To achieve this goal, all talks include practical code examples, case studies and benchmarks.

The subjects and duration of the talks can be customized upon request to match your specific needs.

## OUR LECTURES

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## React Reasonably

*A soft intro to React*

React is a popular library for building web interfaces. Find out what makes it special and why it got so popular in this introductory talk where we start from the basics.

Duration: 1h

## React Faster

*Performance optimization in React apps*

Performance is a key factor in the quality of web applications, as it vastly affects the satisfaction of users and developers.

However, as the complexity and capabilities of web apps grow it is easy to get this factor wrong. In this session, we'll see what performance actually means and introduce tools and patterns that help improve the performance of React applications.

Duration: 1.5h

## Progressive Web Apps

*Web apps with the powers of native apps*

Progressive web apps are web apps with superpowers. They use various techniques and technologies to deliver a user experience that is reliable, fast, and engaging. This means that they have most of the advantages of native apps, combined with the vast reach of the web. In this talk, we'll find out what makes a web app progressive, learn what they can (and can't) do, and try to predict what the future holds for this technology.

Duration: 1.5h

## GraphQL and all the REST

*An intro to GraphQL APIs*

APIs are everywhere - they power the data needs of most apps - either publicly or privately. For many years, REST was the go-to architecture for building APIs. It has many advantages that earned it this status, but as technology advances and web applications become more sophisticated, the limitations of REST start to show. As an alternative, Facebook has developed GraphQL - a new architecture for building web services that attempt to provide the features that are needed by modern, scalable applications.

Duration: 1-2h

## Five Shades of Webapp

*Sorting out web app architectures*

SPA, SSR, static site - these terms get thrown around when talking about web apps, but it is not always clear how they relate to each other and how they affect the performance and scaling of apps. In this talk, we'll analyze what these terms mean, what are their pros and cons and see how they combine in five common application architectures - new and old.

We'll also see examples of how awareness of these factors vastly improved performance and scalability.

Duration: 1-1.5h

## Micro Frontends

*Microservices for the client*

Micro frontends are a relatively new architectural style for building web applications that attempts to apply the principles of microservices architecture to UIs. This pattern is still evolving but as is often the case with new approaches, some regard it as a great idea while others claim it's actually an anti-pattern.

The truth is probably somewhere in-between, so in this session, we will try to understand what the controversy is about: we'll see what micro frontends are, learn how they are built, and also - when we should and should not use them.

Duration: 1.5h

## The Auth

*Securing services on the web*

Auth - we use it every day, but we don't always know how it works behind the scenes. In addition, the abundance of related technologies and protocols makes it difficult to solve the mystery. In this session, we will try to bring order to this area.

We will introduce terms like sessions, tokens, OAuth, OIDC, JWT, SSO, LDAP, and more. We'll see what they mean and where they fit in the big picture of securing online services.

Duration: 1.5h

## Responsive Design

*UIs that work everywhere*

The web is everywhere, from smartwatches to 100" smart TVs.

This poses different challenges when we come to implement modern web applications, one of which is how to design and implement our UI so it is usable across all those screen sizes plus everything in-between?

In this talk, we will look at approaches and principles of creating UI that works across devices and screen sizes. We will learn about the mobile-first approach, responsive design, grids, and media queries and see how they are used in practice. We will also see how new CSS features like CSS grid layouts change the possibilities of laying out UIs on the web.

Duration: 1.5h

## Istio Revolution

*Service mesh introduction*

Istio is an open-source independent service mesh that provides the fundamentals you need to successfully run a distributed microservice architecture. As organizations increasingly adopt cloud platforms, developers have to architect for portability using microservices, while operators have to manage large distributed deployments that span hybrid and multi-cloud deployments. Istio reduces the complexity of managing microservice deployments by providing a uniform way to secure, connect, and monitor microservices.

Duration: 1.5h

# The Time for Vanilla Web Components Has Arrived

## *Web Components API introduction*

Web development changed dramatically during the last few years. With the enormous amount of JavaScript libraries and the new HTML5 standard, today it is much easier to create web apps. When building a web app, you will probably want to reuse some of the web components you built. But how can you do that with the current state of HTML?

One of the new and emerging web standards is Web Components. The Web Components standard enables you to create reusable web components that include HTML, CSS, and JavaScript. In this session, you will get familiar with Web Components API.

Duration: 45min

## #UseThePlatform with Stencil

### *Stencil introduction*

Web development changed dramatically during the last few years. With the enormous amount of JavaScript libraries and the new HTML5 standard, today it is much easier to create web apps. When building a web app, you will probably want to reuse some of the web components you built. But how can you do that with the current state of HTML?

One of the new and emerging web standards is Web Components. The Web Components standard enables you to create reusable web components that include HTML, CSS, and JavaScript. On the other hand, crafting raw components can be cumbersome. This is where The Stencil comes into place. In this session, you will get familiar with Stencil, a compiler that generates standard-compliant Web Components.

Duration: 1h

## One Language to Rule Them All: TypeScript

### *TypeScript introduction*

Creating cross-platform, application-scale JavaScript code that runs in any browser or in any host is very hard. TypeScript is a programming language that changes that situation. In this session, you will get to know the TypeScript language. You will also see how to build an end-to-end web app using the language.

Duration: 1h

## Who's Afraid of Front-End Databases?

*Introduction to working with front-end databases*

IndexedDB is a full-blown database that is hosted inside your browser. In data-driven scenarios, it can help you to persist your data inside your front-end. IndexedDB can also help you to persist data in mobile web disconnected environments and later on the data will be available for synchronization to the server. In this session, you will learn what is IndexedDB, how to use it, and how to incorporate it into your apps.

Duration: 1h

## At Your Service Worker

*Service workers introduction*

Do you want to speed up your web app or make it work offline?

A service worker is an execution context that runs separately from JavaScript main thread and acts as a network proxy. In offline scenarios combining service workers with IndexedDB can help to maintain your data and later on sync it to the server. In this session, you will learn what Service Worker and IndexedDB are, how to use them, and how to incorporate them in your web app to store live data.

Duration: 45min

## Profiling JavaScript Like a Pro

*Learn to use the Chrome DevTools profiler*

As for front-end developers, we strive to build fast and fluid web apps. But how can you find performance problems or memory leaks? How do you profile a web app or Angular-oriented app?

In this session, you will get to know how the browser works. Then, you will learn how to use that information to profile web apps.

Duration: 1h (available for Java, CPP, C#, Python, Node, and front-end development.  
This session is also available as a 3-hour hands-on remote session for a team.)

## Refactoring

*Learn how to change your code to make it easy to change*

Our code grows and evolves all the time. As it grows it becomes harder and harder to change. We refactored the act of changing the code without changing what it does, just to make it easier to handle.

In this session, you will understand the basic technique of refactoring and how to do it in small, safe steps.

Duration: 1h (available for Java, CPP, C#, Python, Node.)

This session is also available as a 3-hour hands-on remote session for a team.)

## Handling Legacy Code

*Learn how to add tests to old, complicated code*

Applying unit tests and TDD to old code that has grown wild over the years is very difficult (We call such code Legacy Code.) The task of just preparing the required parameters to instantiate the class or invoke the method seems impossible.

In this session, you will learn the basic technique of harnessing legacy code - how to make safe changes to weave a safety net around your code.

Duration: 1h (available for Java, CPP, C#, Python, Node.)

## Unit Tests and Test-Driven Development

*Learn to the basic practice of development*

Unit tests are a powerful tool for testing the logic of your code. But this is nothing compared with their power when you write them before you write session is also available as a 3-hour hands-on remote session for a team.)

Duration: 3-hour hands-on remote session for a team.



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