NEW ENGLAND SOFTWARE SYMPOSIUM
MAY 3 - 4, 2024 - BOSTON, MA

NFJS 2024 NO FLUFF JUST STUFF TOUR

World-Class Training for Software Developers and Architects

Software Architecture · Generative AI · Modern Java · Cloud · Microservices · Kubernetes · Kotlin · JavaScript · Machine Learning · Functional Programming · Web App Security · Spring 6 · Testing

Why Attend the NFJS Tour?

No Fluff Just Stuff is focused on delivering an educational experience, free from vendor bias. NFJS features the best speakers in the industry with knowledge and passion for teaching. Our iterative content is updated not only year-to-year but, week-to-week!

Leverage Generative AI

The future is now! Developers must harness the power of generative AI to become more productive and efficient. This frees up valuable time to focus on creative problem-solving and core functionalities, ultimately leading to faster development and higher quality.

In-Depth 90-Minute Sessions

Our longer session format, workshops, and multi-part sessions allow speakers to go in-depth and teach the detailed concepts you need to know.

Agile Practices

Our speakers emphasize and present on topics such as: Test Driven Development, Continuous Integration, Code Quality Measurements, Code Smells, Team Building, and Customer Collaboration.

Learn from the Best

Our speakers are not vendor representatives. They are industry recognized experts. They are published authors, consultants, executives, and open source leaders.

Understand Web Security

The web is an increasingly hostile environment for web applications. The NFJS Tour includes security focused sessions and workshops so you will understand best security practices.

Cloud Architectures

The NFJS Tour explores different cloud computing architectures and how you can take advantage of them.

https://nofluffjuststuff.com

New England Software Symposium

Friday, May. 3

7:30 - 8:15 AM : REGISTRATION/BREAKFAST - GRAND BALLROOM FOYER

8:15 - 8:30 AM : NESS 2023 WELCOME: GRAND BALLROOM

8:30 - 10:00 AM - Sessions

Session #1 @ BALLROOM : Monoliths or Microservices? by Venkat Subramaniam
It almost feels like we keep hearing this chant "Monoliths are bad, Microservices are awesome." When architects, technical leads, and developers reject architecture due to bias or favor due to infatuation organizations lose. The most important question is what are the business needs and which architecture is the most suitable for that.

Session #2 @ WAKEFIELD : Calling AI Tools from Java by Kenneth Kousen
As far as Java is concerned, most AI tools are just another RESTful web service. In this session, learn how to use modern Java features like records, text blocks, the HTTP Client API and more to access ChatGPT, the Whisper audio-to-text transcription API, and image generators like DALL-E, Stable Diffusion, and Midjourney.

Session #3 @ ESSEX : Personal Knowledge Management - Second Brain Methods and Madness by Michael Carducci
We are knowledge workers and ultimately, we must own our growth and learning. [Personal Knowledge Management](https://en.wikipedia.org/wiki/Personal_knowledge_management) is a process of collecting information that one uses to gather, classify, store, search, retrieve and share knowledge in their daily activities and the way in which these processes support work activities. Despite taking notes, bookmarking web content, and highlighting passages in books; often we struggle to recall or rediscover these many insights we pick up daily in our work and life. This session introduces a tool and some process recommendations to never again lose discoveries and knowledge resources.

Session #4 @ MELROSE : Navigating turbulent waters—Beginning Kubernetes—Part I by Raju Gandhi
Confused about Kubernetes? Don't know what it does? This is the session that will bring clarity for all things Kubernetes.

10:00 - 10:30 AM : BREAK: GRAND BALLROOM FOYER

10:30 - 12:00 PM - Sessions

Session #5 @ BALLROOM : Patterns for Microservices by Venkat Subramaniam
Creating Microservices is hard and it takes more effort.

Session #6 @ WAKEFIELD : LangChain4J: An AI Framework for Java by Kenneth Kousen
LangChain is a popular AI framework in the Python world, but recently it has been ported to Java as part of the LangChain4J project. It brings useful abstractions to the process of adding AI capabilities to your Java-based systems, like prompt templates, structured outputs, message chains, and embedding services which allow you to add your own data to LLMs.

Session #7 @ ESSEX : Diffusion of Innovation by Michael Carducci
Statistically speaking, you are most probably an innovator. Innovators actively seek out new ideas, technologies, and mental models by reading books, interacting with a broader social circle, and *attending conferences.* While you may leave this conference with the seed of an idea that has the potential to transform your teams, products, and organization; the battle has only begun. While, as a potential change-agent, you are ideally positioned to conceive of the powerful new ideas, you may be powerless to drive the change that leads to adoption. Your success requires the innovation to *diffuse.*

Session #8 @ MELROSE : Navigating turbulent waters—Beginning Kubernetes—Part II by Raju Gandhi
Confused about Kubernetes? Don't know what it does? This is the session that will bring clarity for all things Kubernetes.

12:00 - 1:00 PM : LUNCH: GRAND BALLROOM

1:00 - 2:30 PM - Sessions

Session #9 @ BALLROOM : Scaling Up with Virtual Threads by Venkat Subramaniam
Threads are lightweight, but do not scale well. That's one of the reasons we have been focused on the elastic capabilities on the cloud. Unfortunately that has an impact both on our environment and your companies wallet.

Session #10 @ WAKEFIELD : Practical AI Tools for Java Developers by Kenneth Kousen

This talk will be tailored to Java developers as we delve into the practical applications of AI tools to ease your software development tasks. We'll explore the capabilities of GitHub Copilot used as a plugin for IntelliJ IDEA and VSCode. We'll also play with GPT-4 and examine ways it can help.

Session #11 @ ESSEX : Tailor-Made Software Architecture by Michael Carducci

Architecture is often described as "the stuff that's hard to change" or "the important stuff (whatever that is)." At its core, architecture defines the very essence of software, transcending mere features and functions to encompass vital capabilities such as scalability, evolvability, elasticity, and reliability. But here's the real question: where do these critical capabilities truly originate? In this session, we'll embark on a journey to uncover the secrets behind successful architectures. While popular architecture patterns may offer a starting point, it's time to unveil the startling truth – both monolith and microservices-based projects continue to stumble and falter at alarming rates. The key to unparalleled success lies in the art of fine-tuning and tailor-making architectures to precisely fit the unique needs of your organization, environment, and the teams delivering the software.

Session #12 @ MELROSE : Container Security Fundamentals Part I by Raju Gandhi

Containers are everywhere. Of course, a large part of the appeal of containers is the ease with which you can get started. However, productionizing containers is a wholly different beast. From orchestration to scheduling, containers offer significantly different challenges than VMs. In particular, in terms of security. Securing and hardening VMs is _very_ different than that for containers. In this two-part session, we will see what securing containers involves.

2:30 - 2:45 PM : BREAK: GRAND BALLROOM FOYER

2:45 - 4:15 PM - Sessions

Session #13 @ BALLROOM : Design Patterns Revisited in Modern Java by Venkat Subramaniam

Design Patterns are common ways to solve problems that developers have discovered over time. They often fill the gaps between the language capabilities and the design goals. When languages mature, sometimes patterns become natural features of languages and blend in to the natural way of writing code instead of a special effort. Java has evolved significantly over the years.

Session #14 @ WAKEFIELD : Practical AI Tools for Java Developers (continued) by Kenneth Kousen

This talk will be tailored to Java developers as we delve into the practical applications of AI tools to ease your software development tasks. We'll explore the capabilities of GitHub Copilot used as a plugin for IntelliJ IDEA and VSCode. We'll also play with GPT-4 and examine ways it can help.

Session #15 @ ESSEX : An Architect's Approach to API Strategies by Michael Carducci

Integration, once a luxury, is now a necessity. Doing this well, however, continues to be elusive. Early attempts to build better distributed systems such as DCOM, CORBA, and SOAP were widely regarded as failures. Today the focus is on REST, RPC, and graphql style APIs. Which is best? The go-to answer for architects is, of course, "it depends."

Session #16 @ MELROSE : Container Security Fundamentals Part II by Raju Gandhi

Containers are everywhere. Of course, a large part of the appeal of containers is the ease with which you can get started. However, productionizing containers is a wholly different beast. From orchestration to scheduling, containers offer significantly different challenges than VMs. In particular, in terms of security. Securing and hardening VMs is _very_ different than that for containers. In this two-part session, we will see what securing containers involves.

4:15 - 4:30 PM : BREAK: GRAND BALLROOM FOYER

4:30 - 6:00 PM - Sessions

Session #17 @ BALLROOM : Designing for Resilience and Scale by Venkat Subramaniam

Why talk about resilience when thinking of scale? It turns out all the effort we put in to achieve great performance may be lost if we are not careful with failures. Failure is not only about unavailability of parts of an application to some users, it may result in overall poor performance for everyone else as well.

Session #18 @ WAKEFIELD : Modern Java 21+: The Next-Level Upgrade by Kenneth Kousen

With much of the industry finally migrating to Java 11, 17, or 21, it's time to learn about many of the newer features you can use in your code. None of the changes since Java 8 have been as dramatic as the move to functional programming, but collectively the latest capabilities can really streamline the way you work. This talk summarizes several of them, like records and record patterns, sealed classes and interfaces, switch expressions, the HTTP client API, pattern matching for switch, and more, using them together in an app to see how they interact and improve your Java coding experience.

Session #19 @ ESSEX : Agile Architecture by Michael Carducci

Agile has become an overused and overloaded buzzword, let's go back to first principles. Agile is the 12 principles. Agile is founded on fast feedback and embraces change. Agile is about making the right decisions at the right time while constantly learning

and growing. Architecture, on the other hand, seems to be the opposite. Once famously described by Grady Booch as "the stuff that's hard to change" there is overwhelming pressure to get architecture "right" early on as the ultimate necessary rework will be costly at best, and fatal at worst. But too much complexity, too early, can be just as costly or fatal. A truly practical approach to agile architecture is long overdue.

Session #20 @ MELROSE : On being an effective developer by Raju Gandhi

As developers we not only operate in different contexts, but also often have these different contexts interplay as part of our work. Each of the tools that we use — version control systems like Git (along with collaborative tools like Github/Gitlab), IDE's like Eclipse/IntelliJ, build systems like Gradle, Ci/Cd tooling like Jenkins, IaaC tools like Ansible, the command line — all introduce context. To be effective developers we need to know when to operate in a certain context, combine or tease apart how these contexts interplay. Can you improve your release announcements if format your commit messages consistently? You bet! How should your build tool interact with your version control system? What does naming your files have to do with how you use your IDE?

6:00 - 7:00 PM : DINNER: GRAND BALLROOM

7:00 - 8:00 PM : Keynote: Engineering Reality: Lessons from Life, Architecture, and Artifice - Michael Carducci

Saturday, May. 4

7:30 - 8:15 AM : BREAKFAST: GRAND BALLROOM

8:15 - 9:45 AM - Sessions

Session #21 @ BALLROOM : Cruising Along With Java: Part 1 by Venkat Subramaniam

Java has come a long way in the recent years.

Session #22 @ WAKEFIELD : Advanced Git by Raju Gandhi

You have been using Git for a while. You know how to stage and commit your work, create and delete branches and collaborate with your team members using remotes. But Git often leaves your confused — ever committed to your work to the wrong branch? Even worse, ever accidentally delete a branch that you needed to keep around? And what is God's good name is "Detached HEAD state"? Why tag commits, when we have branches? Is there a better work-flow than just using merges? What's the difference between a merge and a rebase? The answer to all of these questions, and more, lies in the constitution of a commit, and the directed acyclic graph (DAG) that Git uses to manage your history. This, right here, is the key to understanding everything in Git.

Session #23 @ ESSEX : AI-Enhanced Big Data: Integrating ChatGPT in Data Architectures by Rohit Bhardwaj

In this dynamic talk, we explore the fusion of AI, particularly ChatGPT, with data-intensive architectures. The discussion covers the enhancement of big data processing and storage, the integration of AI in distributed data systems like Hadoop and Spark, and the impact of AI on data privacy and security. Emphasizing AI's role in optimizing big data pipelines, the talk includes real-world case studies, culminating in a forward-looking Q&A session on the future of AI in big data.

Session #24 @ MELROSE : Hypermedia and the rest of REST by Michael Carducci

REST is, undoubtedly one of the most maligned and misunderstood terms in our industry today. So many different things have been called REST, that the world has virtually lost all meaning. Many systems and applications that self-describe as “RESTful” usually are not, at least according to REST as defined in Dr. Roy T. Fielding’s 2000 Dissertation, “Architectural Styles and the Design of Network-based Software Architectures”. The wild success of the architecture derived by Dr. Fielding led many to want to emulate it (even when it was inappropriate to do so). As a shorthand, organizations began referring to “RESTful” systems, which exposed “RESTful” APIs. Over time “REST” became a buzzword referring to a vague generalization of HTTP/json APIs that typically bear little to no resemblance to the central ideas of REST (and thus elicit few of the benefits). Hypermedia is the central pillar and defining characteristic of the REST architectural style yet it remains almost universally absent.

9:45 - 10:00 AM : BREAK: GRAND BALLROOM FOYER

10:00 - 11:30 AM - Sessions

Session #25 @ BALLROOM : Cruising Along with Java: Part 2 by Venkat Subramaniam

Java has come a long way in the recent years.

Session #26 @ WAKEFIELD : Advanced Git (continued) by Raju Gandhi

You have been using Git for a while. You know how to stage and commit your work, create and delete branches and collaborate with your team members using remotes. But Git often leaves your confused — ever committed to your work to the wrong

branch? Even worse, ever accidentally delete a branch that you needed to keep around? And what is God's good name is "Detached HEAD state"? Why tag commits, when we have branches? Is there a better work-flow than just using merges? What's the difference between a merge and a rebase? The answer to all of these questions, and more, lies in the constitution of a commit, and the directed acyclic graph (DAG) that Git uses to manage your history. This, right here, is the key to understanding everything in Git.

Session #27 @ ESSEX : Revolutionizing Design: ChatGPT's Role in Next-Generation Software Architecture by Rohit Bhardwaj

With advanced AI tools, software architects can enhance their project design, compliance adherence, and overall workflow efficiency. Join Rohit Bhardwaj, an expert in generative AI, for a session that delves into the integration of ChatGPT, a cutting-edge generative AI model, into the realm of software architecture. The session aims to provide attendees with hands-on experience in prompt engineering for architectural tasks and optimizing requirement analysis using ChatGPT. It is a compelling talk explicitly designed for software architects who are interested in leveraging generative AI to improve their work.

Session #28 @ MELROSE : The Knowledge Graph - The Story From Daydream to Reality by Michael Carducci

Knowledge graphs have been quietly powering the future, unlocking new capabilities that were unimaginable to most just a few years ago. The few, however, have been imagining this future for decades and we've finally arrived at, what industry analysts are calling, "The year of the knowledge graph"

11:30 - 1:00 PM : LUNCH & EXPERT PANEL DISCUSSION

1:00 - 2:30 PM - Sessions

Session #29 @ BALLROOM : Effective Collaborative Development by Venkat Subramaniam

You may be working in an organization where pairing and/or mobbing is encouraged or even expected. Collaboration has many benefits but it is not easy. What are some of the ways in which we can get effective in collaborative development?

Session #30 @ WAKEFIELD : Git features you aren’t using by Raju Gandhi

In this session we'll take a tour of some features that you might or might not have heard of, but can significantly improve your workflow and day-to-day interaction with Git.

Session #31 @ ESSEX : Securing the Digital Landscape: A Deep Dive into OWASP Top 10 for Applications, APIs, and LLMs by Rohit Bhardwaj

Join us for an immersive journey into the heart of modern cybersecurity challenges. In this groundbreaking talk, we delve into the intricacies of securing your digital assets with a focus on three critical domains: applications, APIs, and Large Language Models (LLMs). As developers and architects, you understand the paramount importance of safeguarding your systems against evolving threats.
Our session offers an exclusive opportunity to explore the industry-standard OWASP Top 10 vulnerabilities tailored specifically to your domain. Uncover the vulnerabilities lurking within your applications, APIs, and LLMs, and gain invaluable insights into mitigating risks and fortifying your defenses. Through live demonstrations and real-world examples, you'll witness firsthand the impact of security breaches and learn proactive strategies to combat them. Whether you're a seasoned architect seeking to fortify your organization's security posture or a developer striving to build resilient systems, this talk equips you with the knowledge and tools essential for navigating the complex landscape of cybersecurity.

Session #32 @ MELROSE : Data-Centric in Action by Michael Carducci

In 2017, an organization known as The Semantic Arts published their "[data-centric manifesto](http://www.datacentricmanifesto.org/)" leading with this paragraph. &gt "We have uncovered a root cause of the messy state of Information Architecture in large institutions and on the web today. It is the prevailing application-centric mindset that gives applications priority over data. The remedy is to flip this on its head. **Data is the center of the universe; applications are ephemeral.**" While the vision and ideas of this manifesto are compelling, implementation details are scarce leaving the potential out of reach of many busy developers and architects.

2:30 - 2:45 PM : BREAK: GRAND BALLROOM FOYER

2:45 - 4:15 PM - Sessions

Session #33 @ BALLROOM : Programming with Structured Concurrency by Venkat Subramaniam

Dividing a large problem into subproblems that are scheduled to run on different threads is an often used solution. We've used executors and fork join pool for such problems in the past. These solutions, in spite of being very powerful, has significant limitations.

Session #34 @ WAKEFIELD : Modular Monoliths: A happy middle by Raju Gandhi

In this session we will discuss what modular monoliths are, what they bring to the table, and how they offer a great middle ground between monoliths and distributed architectures like microservices.

Session #35 @ ESSEX : Graph Mastery: From Algorithms to Knowledge Graphs by Rohit Bhardwaj

Graph technology has been the fastest-growing sector in database systems over the past decade. This talk addresses the strategic importance of mastering graph technologies, which is crucial for professionals who are at the forefront of technological innovation, coding efficiently, and system design. Mastering these tools isn't just an enhancement—it's an imperative. In this comprehensive session, we'll explore high-level graph algorithms that form the backbone of modern, complex systems and discuss how these algorithms are integral to the architecture of efficient graph databases. We will delve into the advanced functionalities and strategic implementations of knowledge graphs, illustrating their essential role in integrating disparate data sources, empowering AI applications including generative AI, and enhancing business intelligence. Join us to navigate the complexities and opportunities this dynamic field presents, ensuring you remain at the cutting edge of technology and continue to drive significant advancements in your projects and enterprises.

Session #36 @ MELROSE : The Influential Engineer - Overcoming resistance to change by Michael Carducci

By the end of this conference you will have learned many new tools and technologies. The easy part is done, now for the hard part: getting the rest of the team-and management-on board with the new ideas. Easier said than done. Whether you want to effect culture change in your organization, lead the transition toward a new technology, or are simply asking for better tools; you must first understand that having a "good idea" is just the beginning. How can you dramatically increase your odds of success? You will learn 12 concrete strategies to build consensus within your team as well as 6 technique to dramatically increase the odds that the other person will say "Yes" to your requests.

4:15 - 4:30 PM : BREAK: GRAND BALLROOM FOYER

4:30 - 6:00 PM - Sessions

Session #37 @ BALLROOM : Let's Have Some Fun with Game Of Life: And Learn to Think Functionally Along the Way by Venkat Subramaniam

Game of Life is an intriguing game. At first look it looks simple, but as you look closer, it appears to be quite complex. How can we implement this game with different constraints, what are the constraints? Is it possible to use functional programming for this, to honor immutability? You see, it is intriguing.

Session #38 @ WAKEFIELD : Measuring your architecture by Raju Gandhi

It's not just architecture—it's evolutionary architecture. But to evolve your architecture, you need to measure it. And how does that work exactly? How does one measure something as abstract as architecture? In this session we'll discuss various strategies for measuring your architecture. We'll see how you know if your software architecture is working for you, and how to know which metrics to keep an eye on. We'll also see the benefits of measuring your architecture.

Session #39 @ ESSEX : Enterprise Architecture for Next-Gen Software Development by Rohit Bhardwaj

This talk explores how cutting-edge technologies and trends will shape the future of enterprise software development, creating opportunities for innovation and efficiency. We'll discuss how to leverage these technologies within an Enterprise Architecture framework to build a robust roadmap that guides enterprises through technological advancements and competitive landscapes.

Session #40 @ MELROSE : Influential Engineer Part 2 - Persuasion Patterns by Michael Carducci

In Part 1, you learned the core principles of influence and persuasion. How to we take this back to the office and apply what we've learned?