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Live coding eBPF with streaming abstractions

eBPF gives us an extraordinary amount of power, allowing to attach custom programs to many subsystems in the kernel. We use it to build lots of helpful observability and security tools, but there is a problem: eBPF is hard and nonintuitive for developers who are not familiar with low-level programming concepts.

In this talk, we will discuss a novel approach to writing programs for the eBPF virtual machine, building on a new set of abstractions borrowed from streaming databases, functional programming, and visual live coding environments. We will see how such abstractions can help us to simplify our development workflows, allowing us to build tools from a set of visual composable blocks. A prototype of a new open source integrated development environment for eBPF, Metalens, will be demonstrated.

I agree to abide by the anti-harassment policy

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Primary author: BAKSALYAR, Nikita

Presenter: BAKSALYAR, Nikita

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