

Welcome to MLOps for Scaling TinyML



What is Tiny Machine Learning (**TinyML**)?

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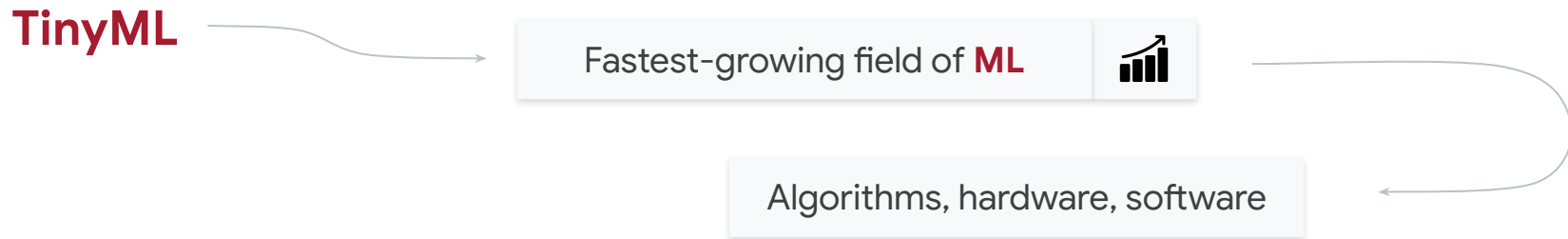
TinyML



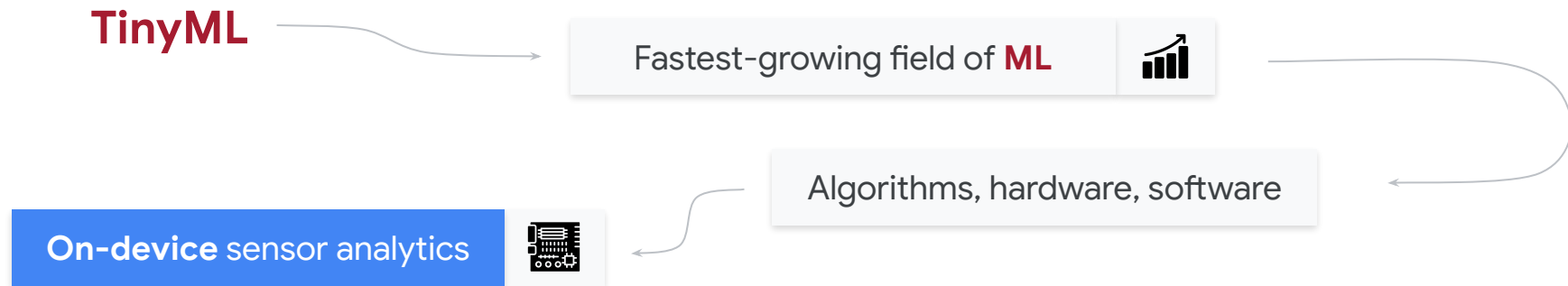
Fastest-growing field of **ML**



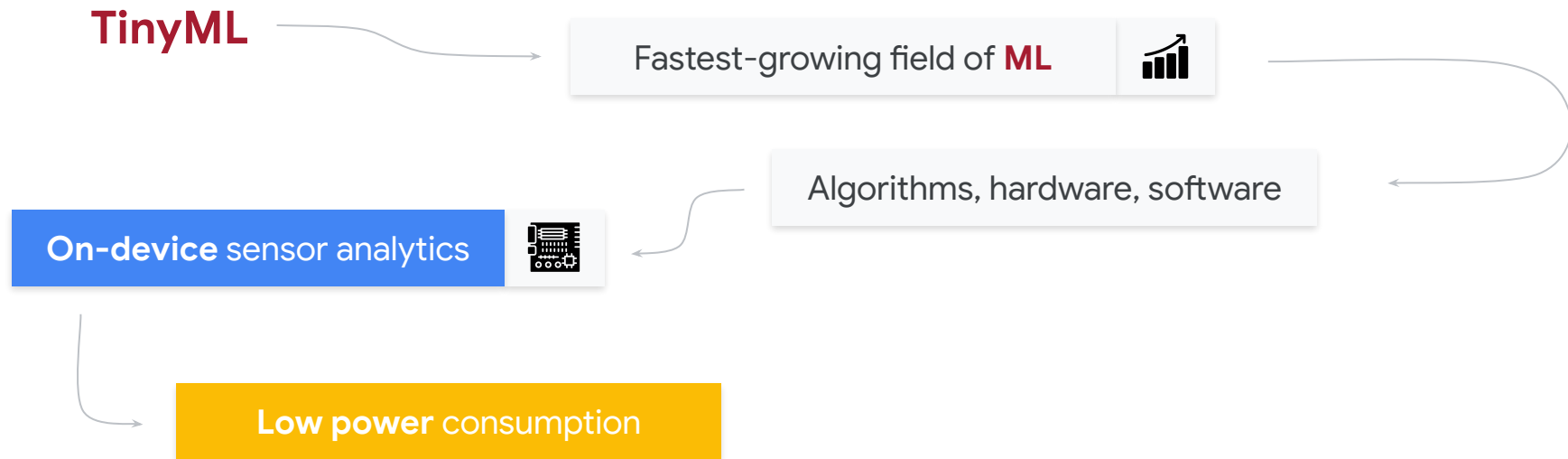
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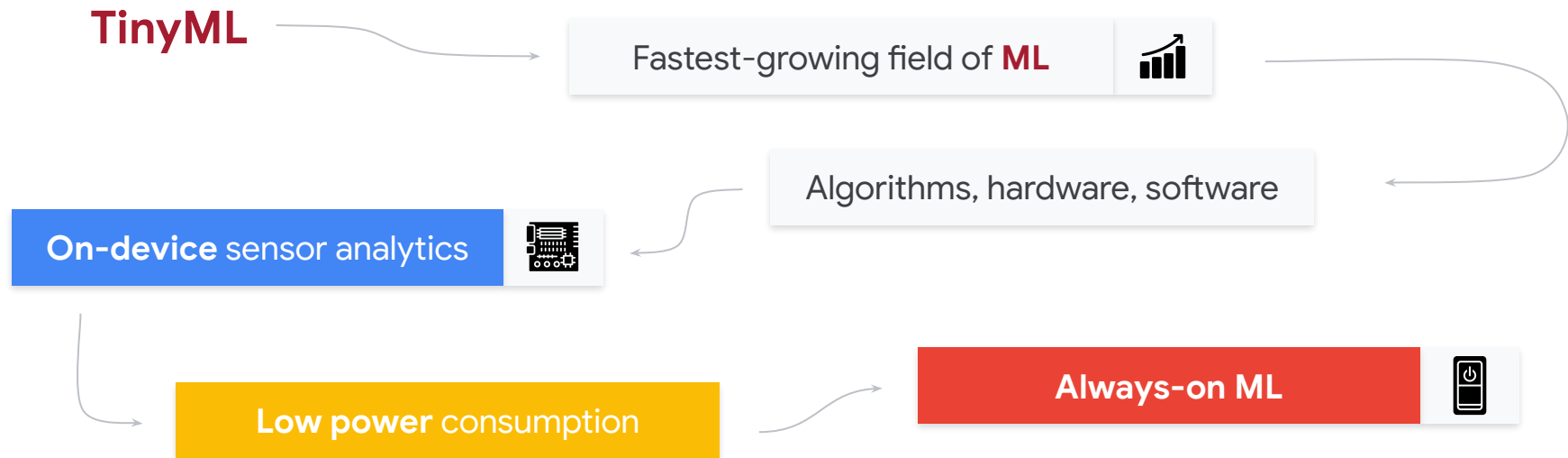
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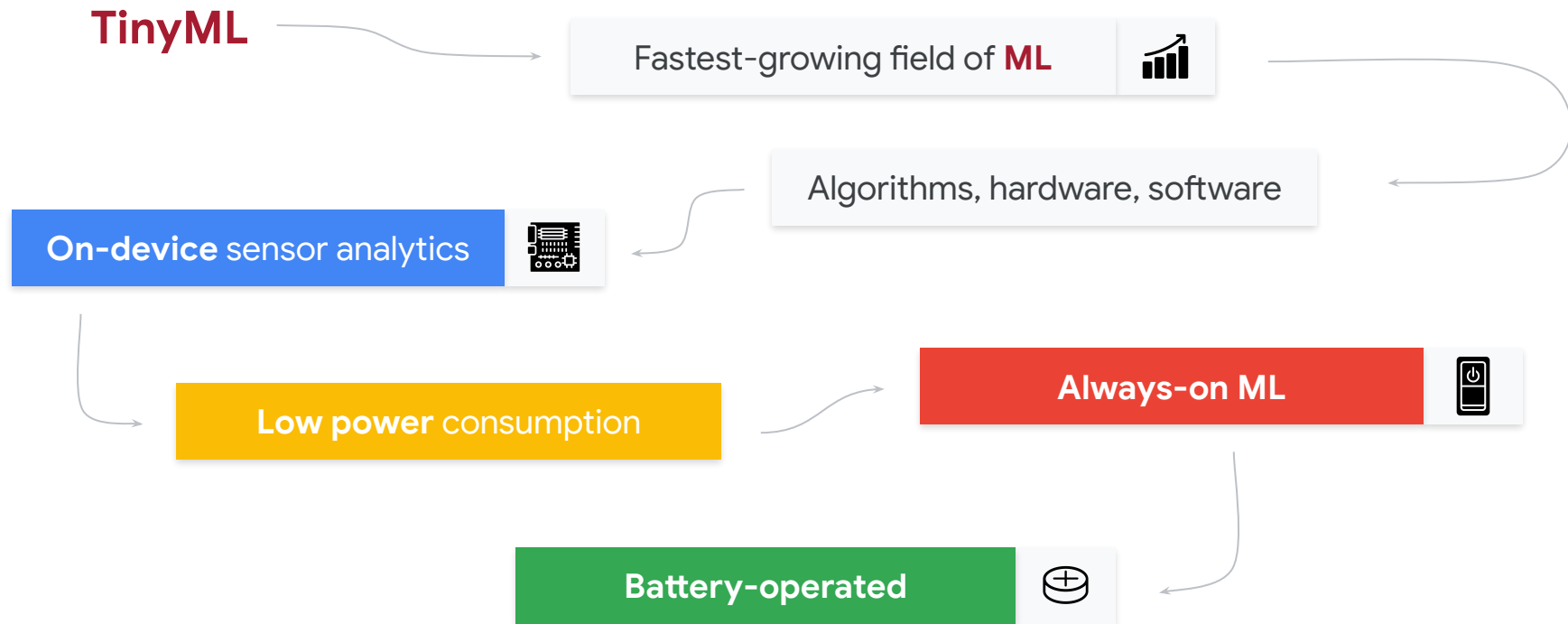
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No Good Data Left Behind

5 Quintillion

bytes of data produced
every day by IoT

<1%

of unstructured data is
analyzed or used at all

Source: Harvard Business Review, [What's Your Data Strategy?](#), April 18, 2017
Cisco, [Internet of Things \(IoT\) Data Continues to Explode Exponentially. Who Is Using That Data and How?](#), Feb 5, 2018

Endpoint Devices

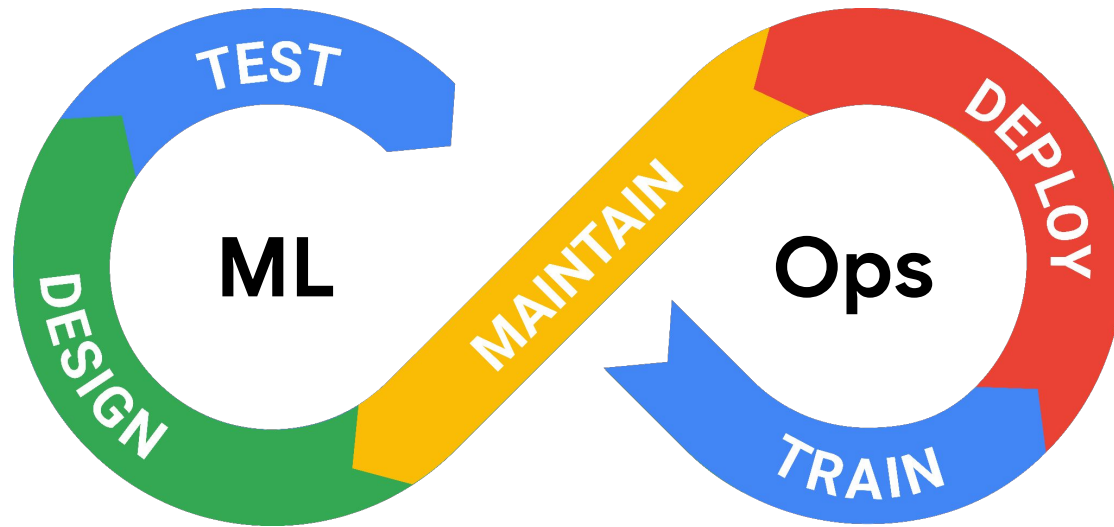


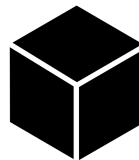
Google Assistant



ML

Ops





Data Scientist:

Why is the model drifting?
Do we need to retrain?



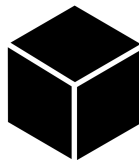
DevOps:

How do push, scale & maintain the model?



Data Engineer:

Are we getting the right data?



Business dev:

How much value does the model bring?



Product Manager:

What are the model limitations?



Compliance:

Is the model safe?



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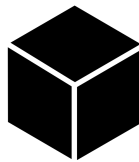
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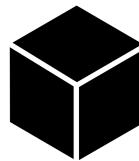
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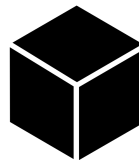
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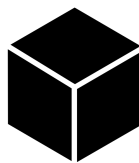
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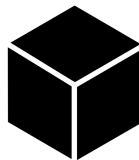
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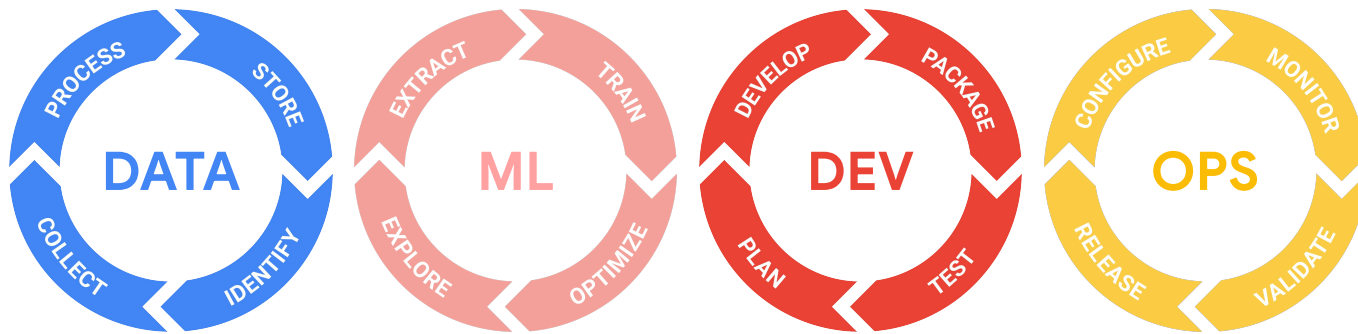
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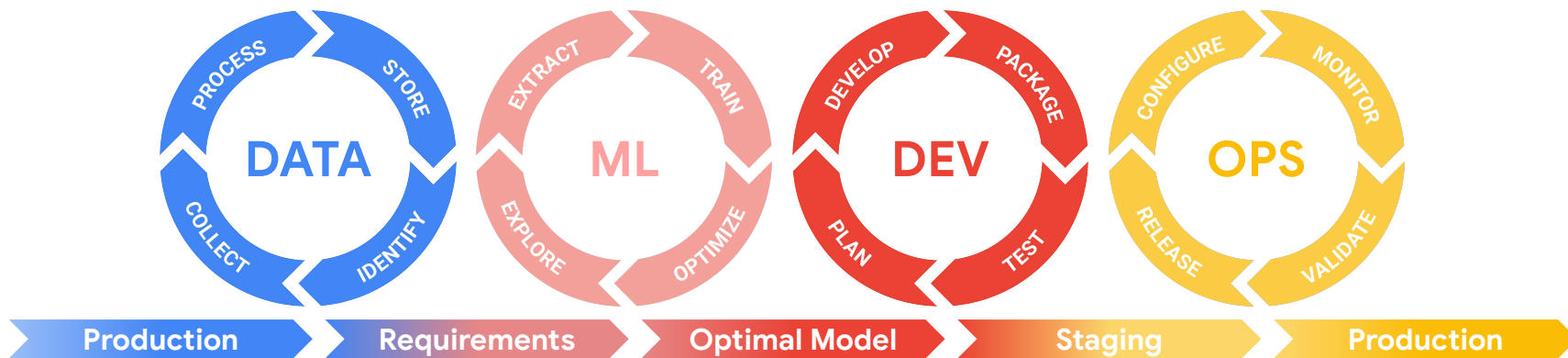


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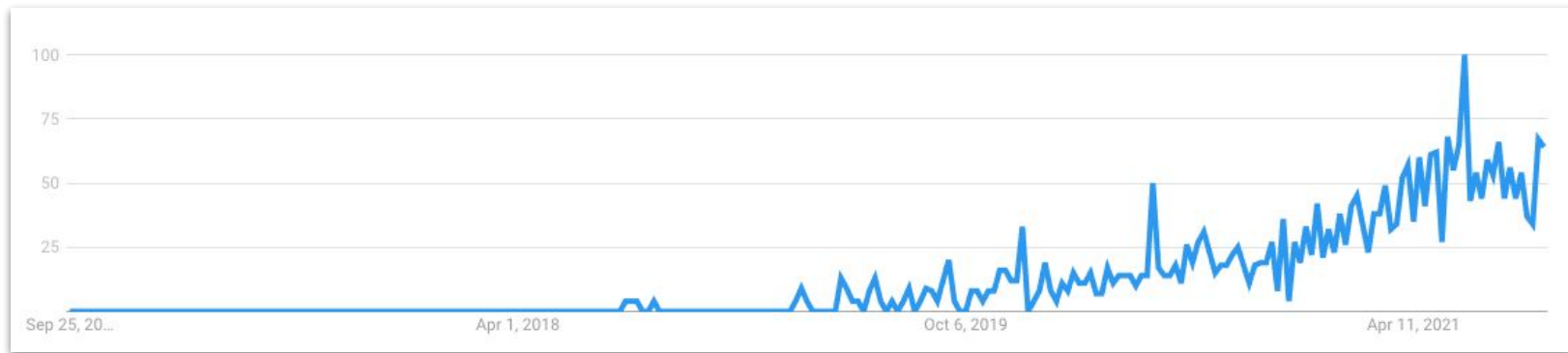
Is the model safe?







MLOps **interest** over time



“...developing and deploying ML systems is relatively fast and cheap, but maintaining them over time is difficult and expensive.” by D. Sculley et al. at Google, “Hidden Technical Debt in Machine Learning Systems,” NIPS 2015