

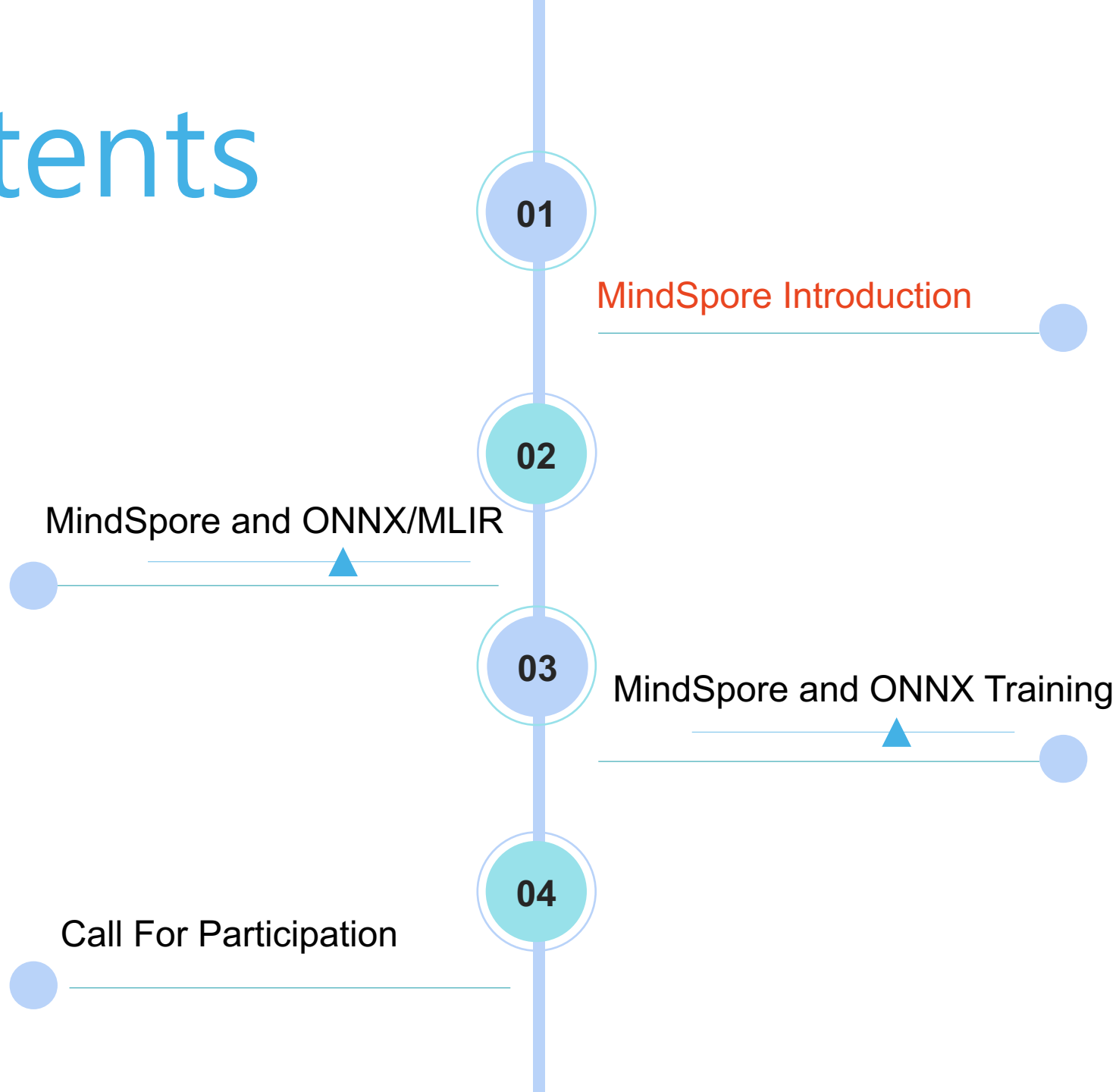


MindSpore

MindSpore and ONNX

Zhipeng Huang

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MindSpore Introduction



MindSpore is a new open source deep learning training/inference framework that could be used for mobile, edge and cloud scenarios.

MindSpore is designed to provide development experience with friendly design and efficient execution for the data scientists and algorithmic engineers, native support for Ascend AI processor, and software hardware co-optimization.

At the meantime MindSpore as a global AI open source community, aims to further advance the development and enrichment of the AI software/hardware application ecosystem.



<https://www.mindspore.cn>

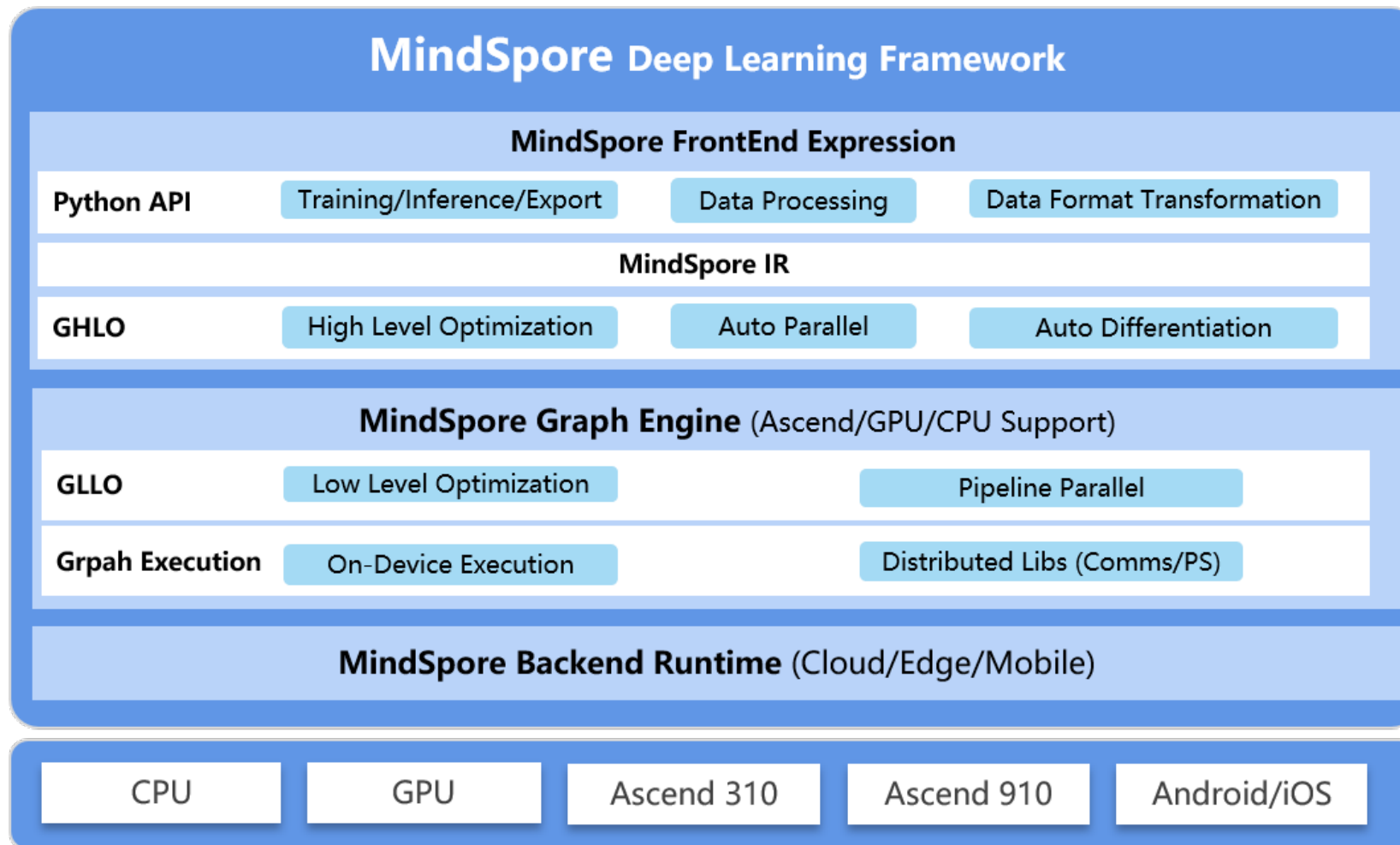


<https://www.gitee.com/mindspore>

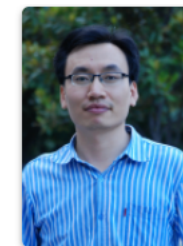
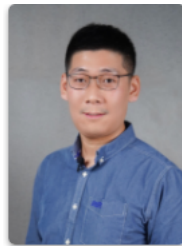
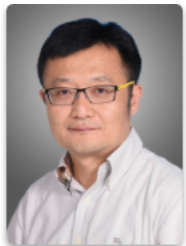


<https://www.github.com/mindspore-ai>

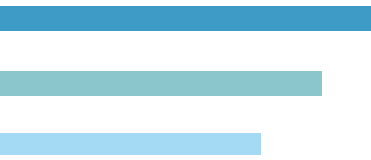
Overview



Technical Steering Committee



14 members from various universities/institutions/companies that forms an open and global technical governing body



SIG/WG



SIGs

WGs

- FrontEnd,
- Compiler
- Executor
- ModelZoo
- Data
- GraphEngine
- Visualization
- Security
- ...

- Documentation
- Infrastructure
- ...

mindspore-ai / community

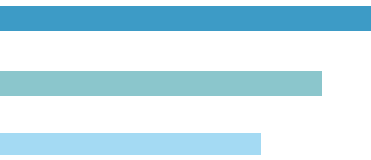
Unwatch 5 Star 4 Fork 0

Code Issues 0 Pull requests 0 Actions Projects 0 Wiki Security Insights Settings

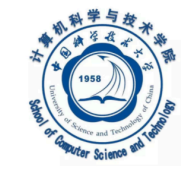
Branch: master community / sigs / Create new file Upload files Find file History

Commit	Message	Time
dengyiping2014	add frontend sig	Latest commit becc448 5 days ago
..	..	
data	update notes for data sig 001-20200402.md	6 days ago
executor	add executor sig	6 days ago
frontend	add frontend sig	5 days ago
visualization	add visualization repo for sig	7 days ago

Open Development

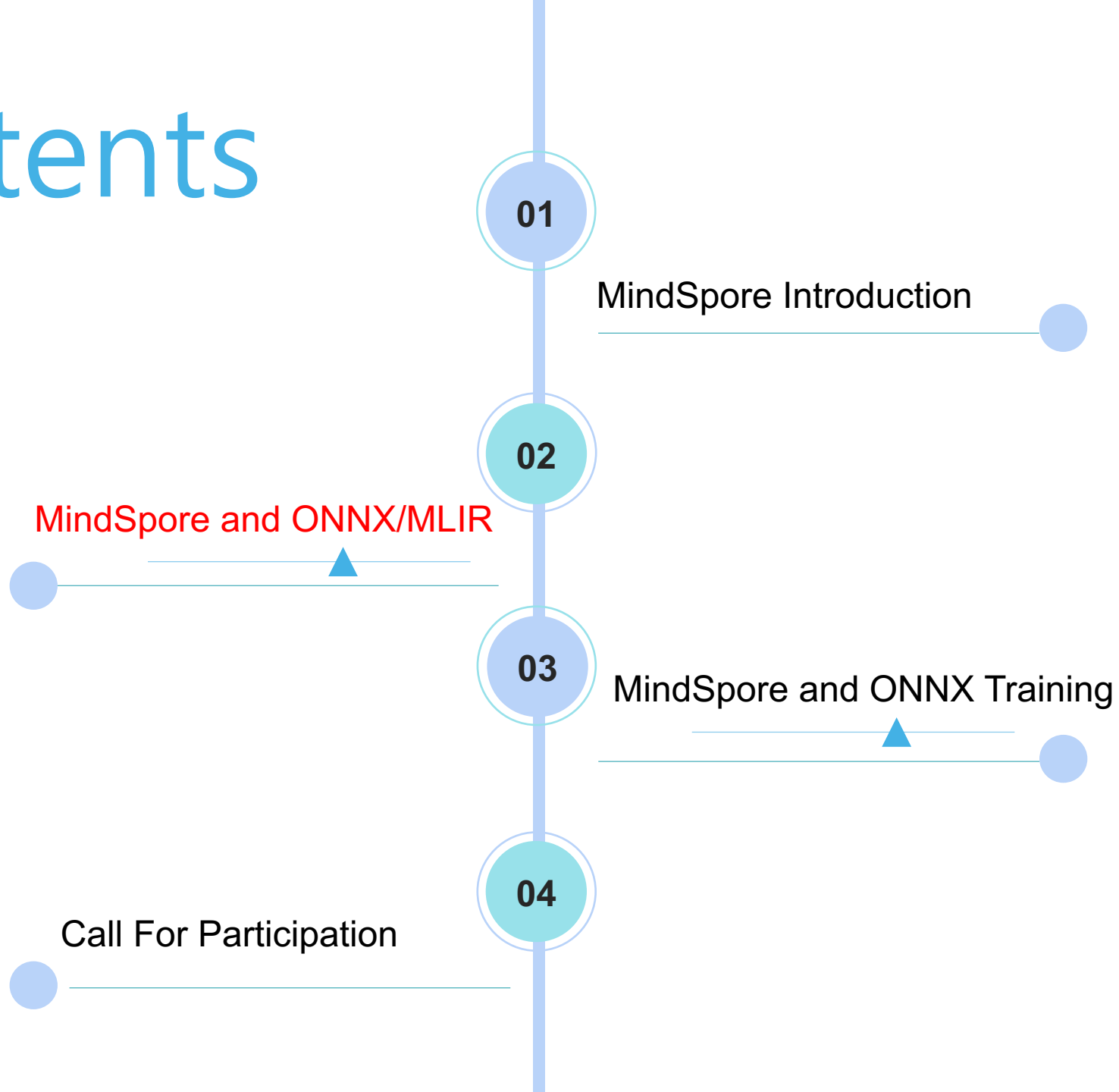


Community partners

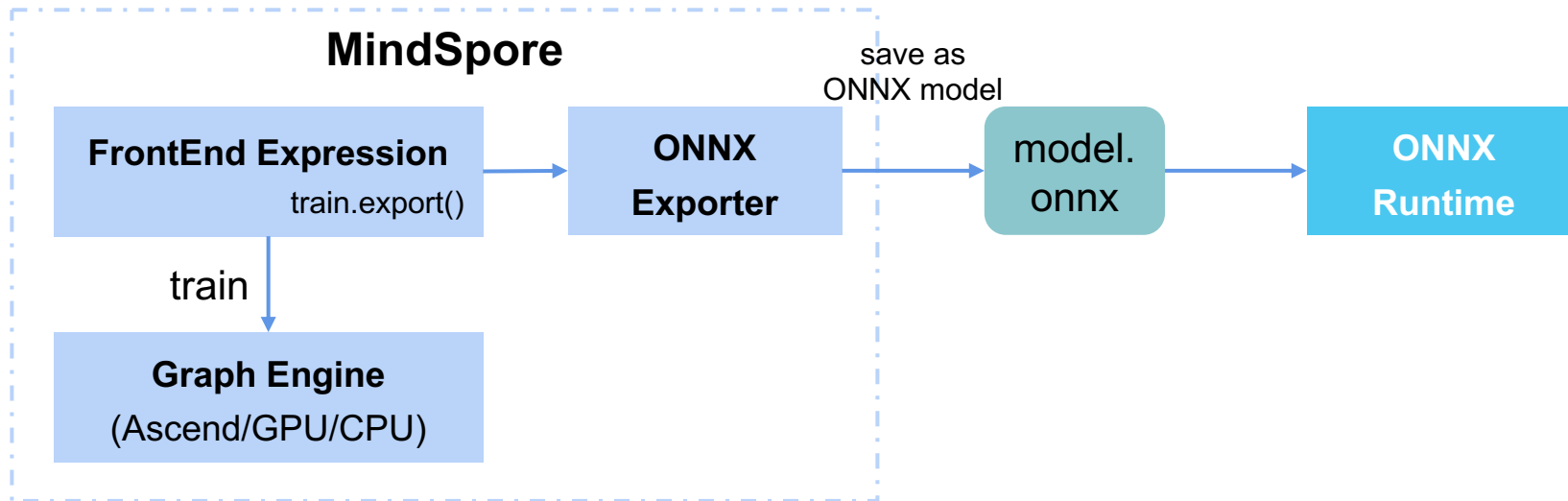


Open Collaboration

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MindSpore ONNX Exporter Introduction



1. Use MindSpore model train API to perform model training with saving checkpoint parameters
2. Load model parameters into the network to be exported (such like LeNet)
3. Call `train.export()` to convert MindSpore model to ONNX model
4. Perform model inference on ONNX Runtime



MindSpore

MindSpore ONNX Exporter Support

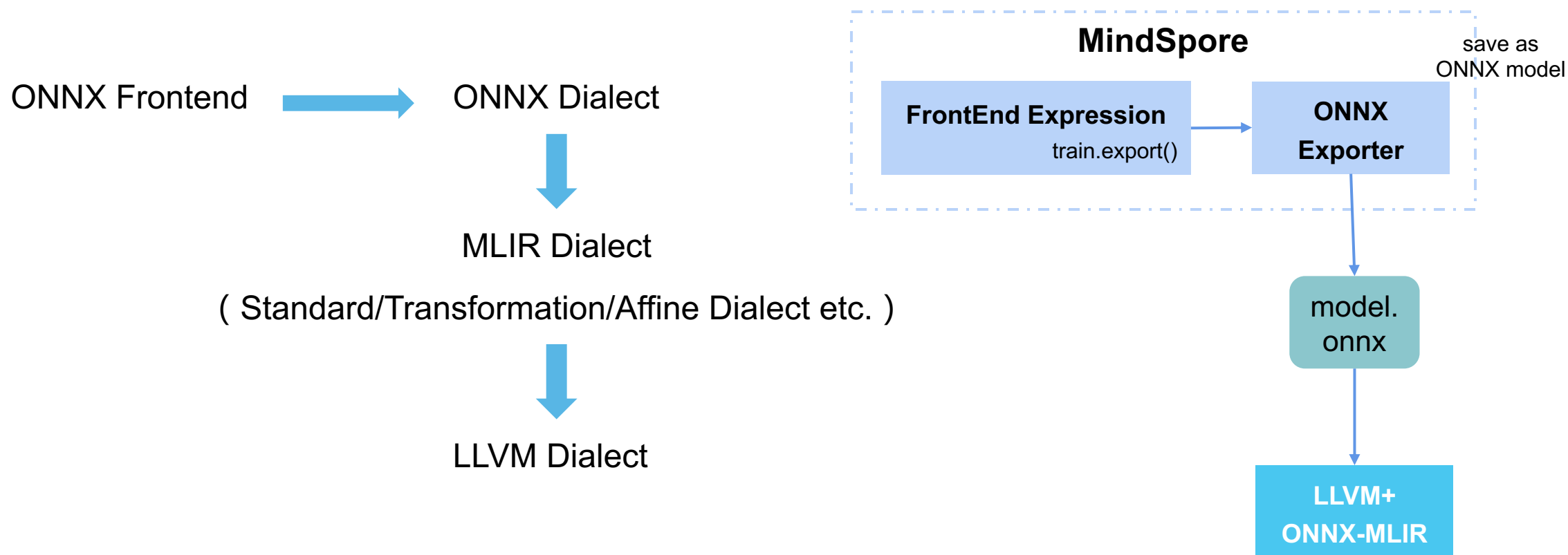
MindSpore Operator	ONNX Operator	MindSpore Operator	ONNX Operator
TensorAdd	Add	BatchNorm	BatchNormalization
Mul	Mul	Reshape	Reshape
ReLU	Relu	ReduceMean	ReduceMean
Sigmoid	Sigmoid	Cast	Cast
Flatten	Flatten	PReLU	PRelu
Squeeze	Squeeze	Argmax	ArgMax
Conv2D	Conv	SimpleMean	AveragePool
BiasAdd	Add	MaxPool	MaxPool
MatMul	Gemm	AvgPool	AveragePool

- **Operator Support:** 18
- **Network Support:** LeNet, ResNet50, AlexNet
- **Roadmap:** More operators and networks (in ModelZoo) are WIP



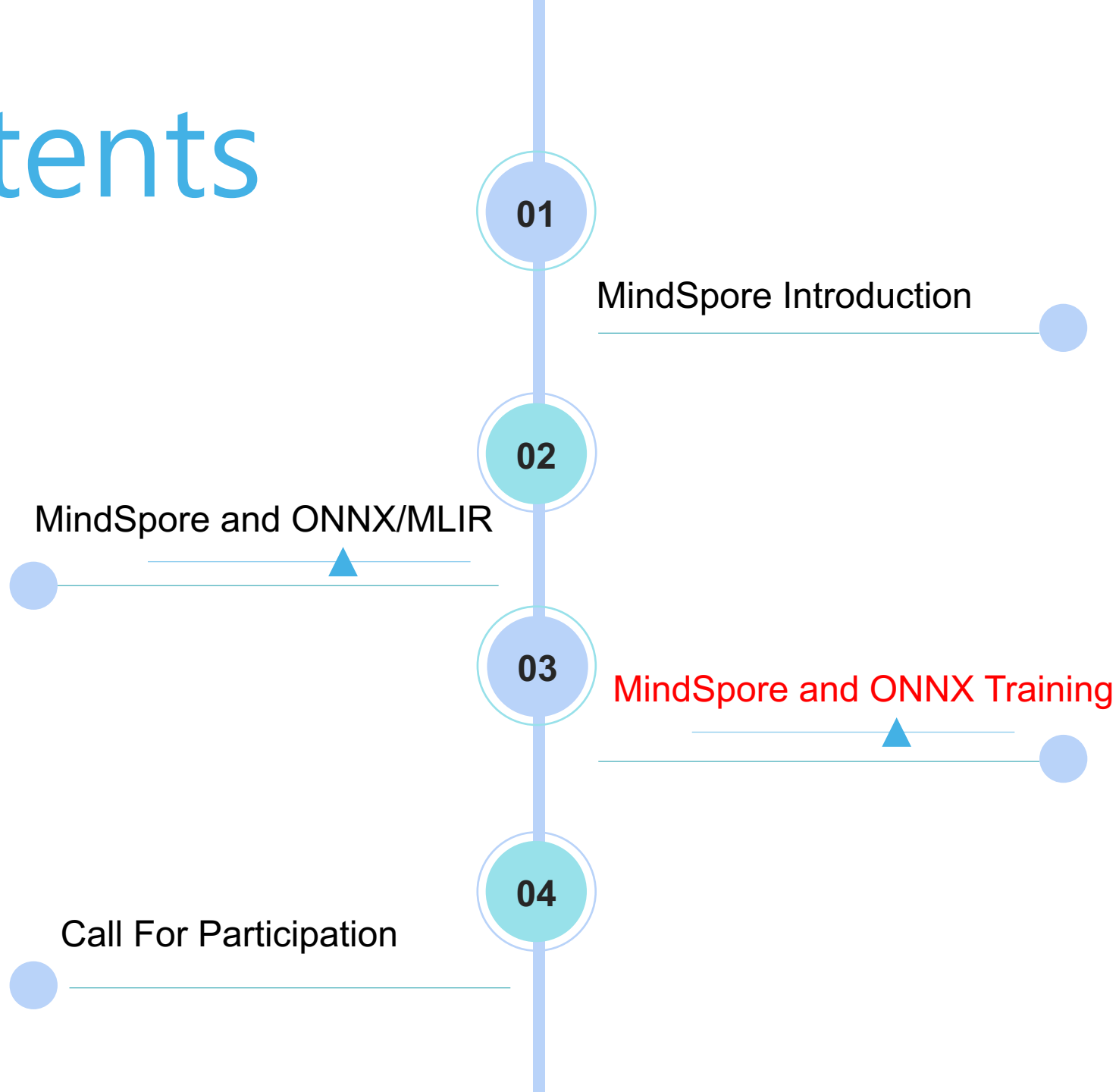
MindSpore

Exploring MindSpore and ONNX-MLIR (Idea)

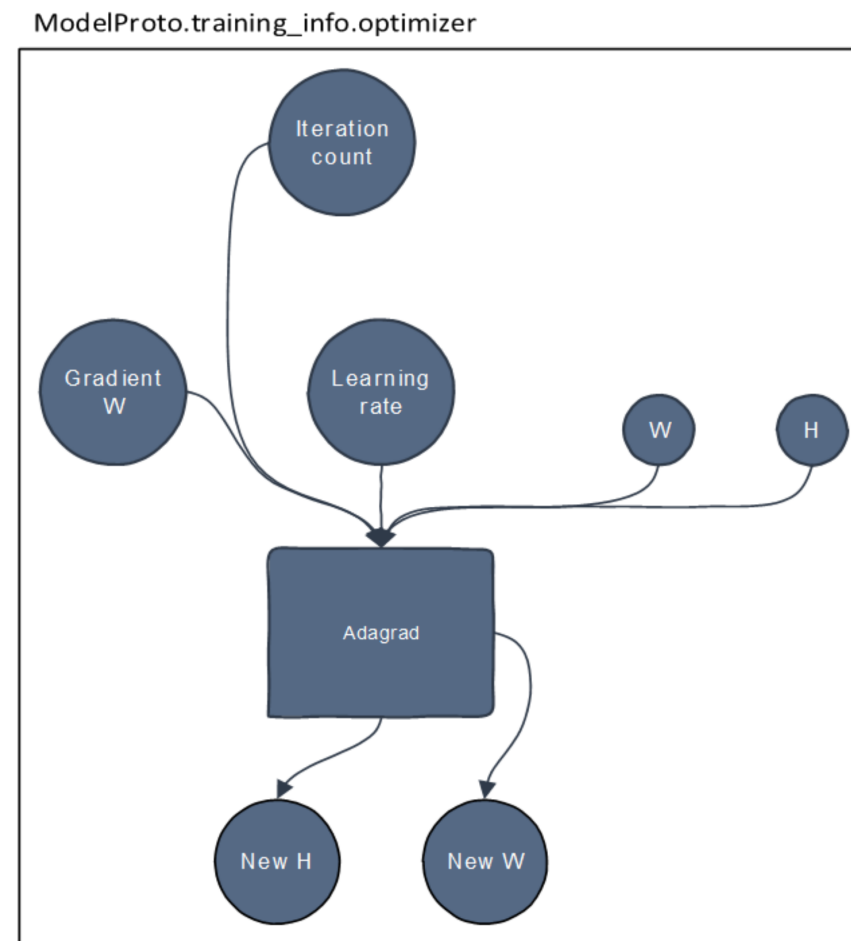
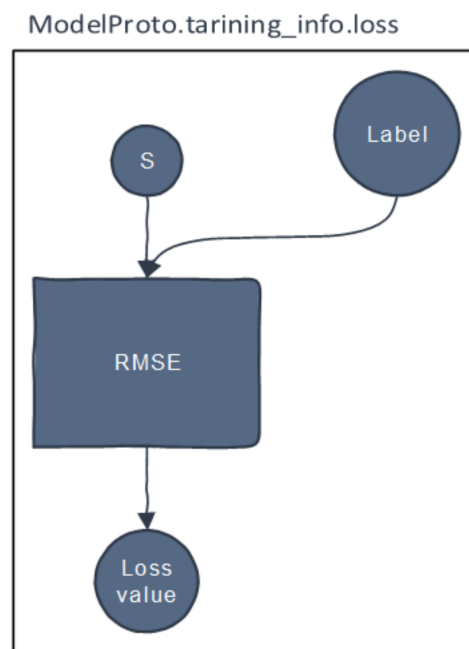
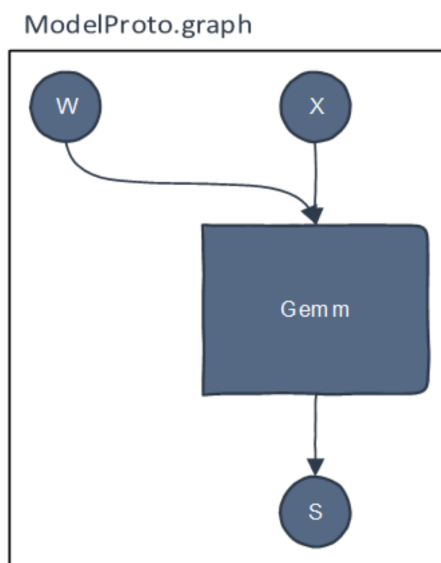
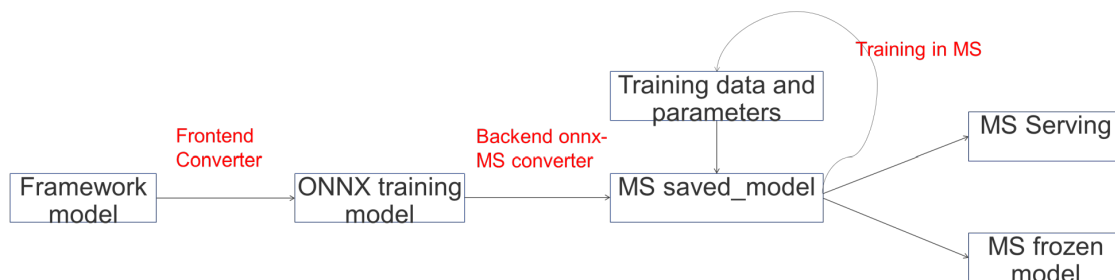


<https://github.com/onnx/onnx-mlir>

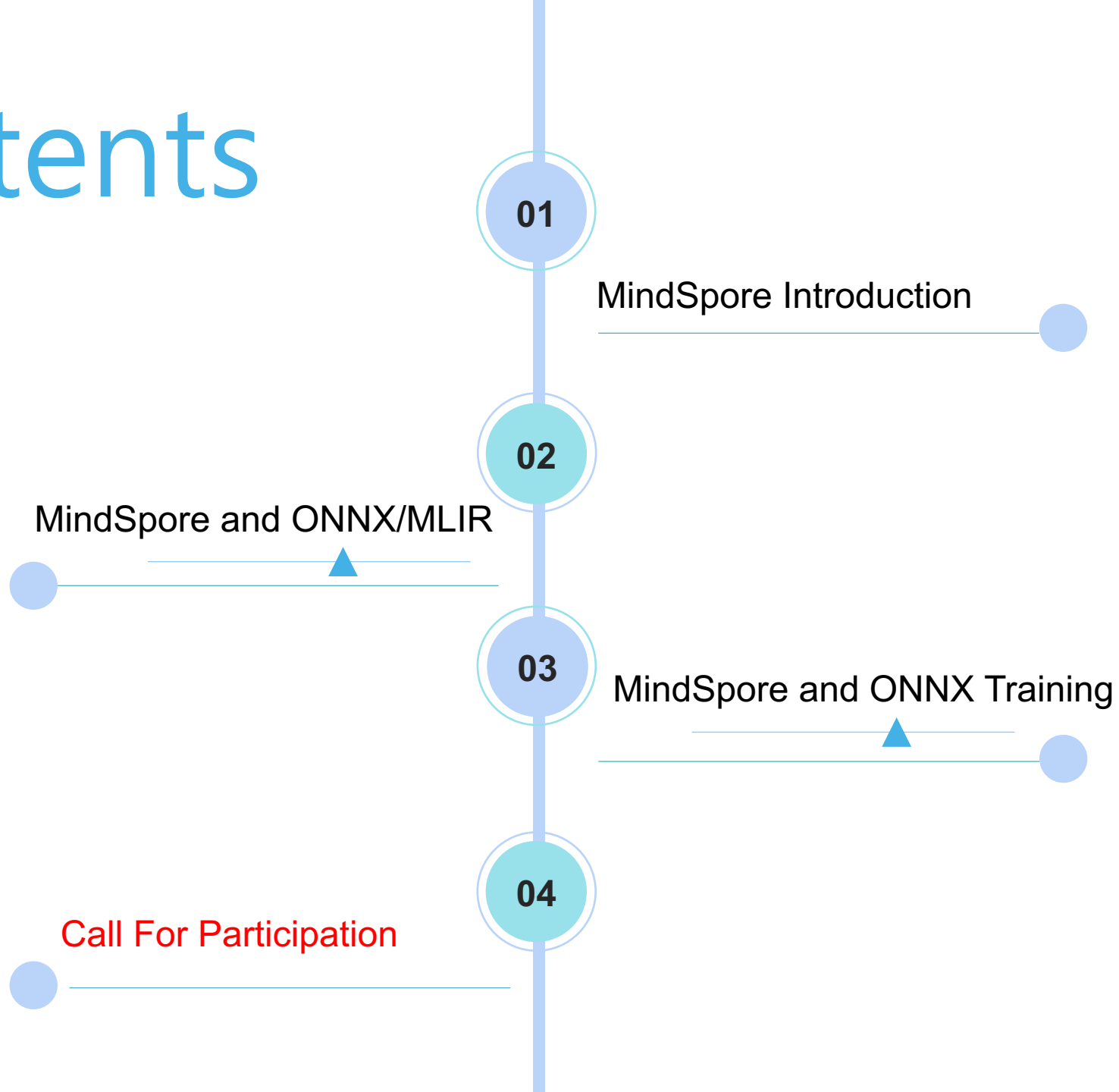
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Exploring MindSpore and ONNX Training (Idea)



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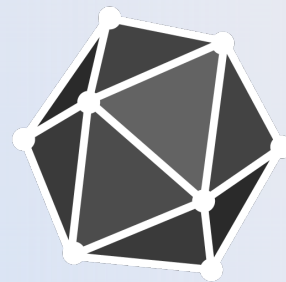
MindSpore

Call For Participation

- Checkout the Code
 - ❑ <https://gitee.com/mindspore> (main development)
 - ❑ <https://github.com/mindspore-ai> (mirror)
- Try with docker
 - ❑ `docker pull mindspore/mindspore-cpu:0.1.0-alpha`
 - ❑ `docker pull mindspore/mindspore-cuda10.1:0.1.0-alpha`
 - ❑ `docker pull mindspore/mindspore-cuda9.2:0.1.0-alpha`
- Discussion (you can initiate an ONNX WG !)
 - ❑ Slack:https://join.slack.com/t/mindspore/shared_invite/enQtOTcwMTIxMDI3NjM0LTNkMWM2MzI5NjlyZWU5ZWQ5M2EwMTQ5MWNiYzMxOGM4OWFhZjI4M2E5OGI2YTg3ODU1ODE2Njg1MThiNWl3YmQ
 - ❑ Mailing list: <https://mailweb.mindspore.cn/postorius/lists/mindspore-discuss.mindspore.cn/>



MindSpore



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MindSpore

<https://www.mindspore.cn>



gitee

<https://www.gitee.com/mindspore>



GitHub

<https://www.github.com/mindspore-ai>