Cloudy distributed evolutionary computation

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Instructor

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Course Agenda

- Introduction.
- What is virtualization and how can use it.
- Best practices in cloud development and deployment.
- Deploying evolutionary algorithms applications to the cloud.
- Cloudy evolutionary algorithms and paradigms.
- Volunteer computing for evolutionary algorithms.

Virtualization

- Virtualization concepts and paradigms.
- Virtual machines, containers, cloud resources.
- Physical support for virtualization.
- Evolutionary algorithms for virtualization optimization.

Best practices

- Application development for the cloud: DevOps
- Software-defined infraestructure.
- Open Science: start here

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Cloud deployment

- Commercial products.
- Build your own
- Software-defined infraestructure.
- Open Science: start here

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Cloudy Evolution

- Distributed evolutionary computing, cloud edition
- Volunteer computing.
- Cloudy GA features: asynchrony, churn, heterogeneity.
- Case studies: examples of evolutionary algorithms in the cloud.

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