An introduction to Julia programming

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(Did we mention it should be as fast as C?)"

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Who is using Julia?

Stanford University. Introduction to Multidisciplinary Design Optimization (Prof. Mykel J. Kochenderfer).

MIT. Integer Programming and Combinatorial Optimization (Prof. Juan Pablo Vielma).

MIT. Optimization Methods (Prof. Dimitris Bertsimas and Dr. Phebe Vayanos).

University at Buffalo. Linear Programming (Prof. Changhyun Kwon).

"Sapienza" University of Rome. Operations Research (Giampaolo Liuzzi).

University of South Florida. Nonlinear Optimization and Game Theory (Prof. Changhyun Kwon).

What can I do with Julia?

Simple Audio IO in Julia (AudioIO).

A neural network (BackpropNeuralNet).

Support vector machines (LIBSVM, LIBLINEAR).

Machine learning (MachineLearning).

Bioinformatics and Computational Biology (Bio).

Curve fitting (CurveFit).

Describe and model financial markets (FinancialMarkets).

Black-box optimization (BlackBoxOptim).

Combinatorics (Combinatorics).

Evolutionary and genetic algorithms (Evolutionary).

Gurobi, GLPK, CPLEX, Cbc, Clp CoinOptServices, JuMP.

And more...

What we will do?

Basic Julia programming.

Explore JuMP for Mixed Integer Linear problems.

Why numbering should start at zero? "I don't know how many of you have ever met Dijkstra, but you probably know that arrogance in computer science is measured in nano-Dijkstras." (Alan Kay)