$\dot{\text{mutation}}_{\text{prob}} = 0.9$

genetic_scheme_type = GeneticSchemeTypesEnum.steady_state

selection_types = SelectionTypesEnum.tournament

mutation_types = [<function reverse_mutation at 0x0000020FD2F5DD30>, <function single_edge_mutation at 0x0000020FD2F5DCA0>]

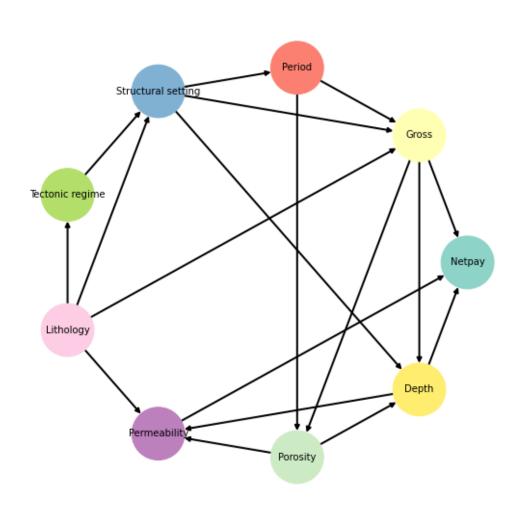
crossover_types = [<function custom_crossover at 0x0000020FD2F5DB80>] stopping_after_n_generation = 10

actual generation num = 21

Nodes: [Netpay, Gross, Period, Structural setting, Tectonic regime, Lithology,

Permeability, Porosity, Depth]

Edges: [('Gross', 'Netpay'), ('Gross', 'Porosity'), ('Gross', 'Depth'), ('Period', 'Gross'), ('Period', 'Porosity'), ('Structural setting', 'Gross'), ('Structural setting', 'Period'), ('Structural setting', 'Depth'), ('Tectonic regime', 'Structural setting'), ('Lithology', 'Gross'), ('Lithology', 'Structural setting'), ('Lithology', 'Tectonic regime'), ('Lithology', 'Permeability'), ('Permeability', 'Netpay'), ('Porosity', 'Permeability'), ('Porosity', 'Depth', 'Netpay'), ('Depth', 'Permeability')]



 $\dot{\text{mutation}}_{\text{prob}} = 0.9$

genetic_scheme_type = GeneticSchemeTypesEnum.steady_state

selection_types = SelectionTypesEnum.tournament

mutation_types = [<function reverse_mutation at 0x0000020FD2F5DD30>, <function single_edge_mutation at 0x0000020FD2F5DCA0>]

crossover_types = [<function custom_crossover at 0x0000020FD2F5DB80>]

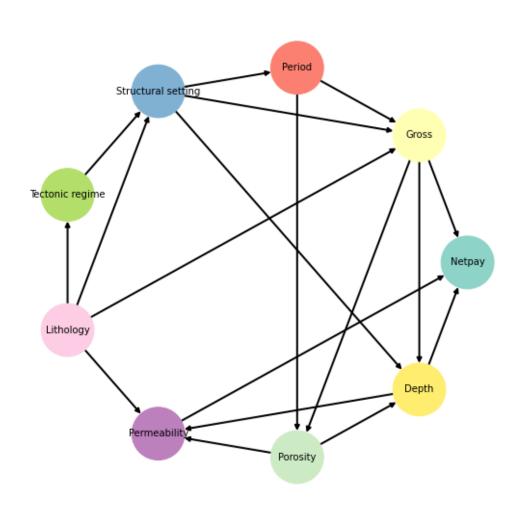
stopping_after_n_generation = 10

actual generation num = 22

Nodes: [Period, Lithology, Gross, Netpay, Porosity, Depth, Tectonic regime,

Structural setting, Permeability]

Edges: [('Period', 'Gross'), ('Period', 'Porosity'), ('Lithology', 'Gross'), ('Lithology', 'Tectonic regime'), ('Lithology', 'Structural setting'), ('Lithology', 'Permeability'), ('Gross', 'Netpay'), ('Gross', 'Permeability'), ('Porosity', 'Depth'), ('Porosity', 'Permeability'), ('Depth', 'Netpay'), ('Tectonic regime', 'Structural setting', 'Structural setting', 'Period'), ('Structural setting', 'Depth'), ('Permeability', 'Netpay'), ('Permeability', 'Depth')]



 $\dot{\text{mutation}}$ _prob = 0.9

genetic_scheme_type = GeneticSchemeTypesEnum.steady_state

selection_types = SelectionTypesEnum.tournament

mutation_types = [<function reverse_mutation at 0x0000020FD2F5DD30>, <function single_edge_mutation at 0x0000020FD2F5DCA0>]

crossover_types = [<function custom_crossover at 0x0000020FD2F5DB80>] stopping_after_n_generation = 10

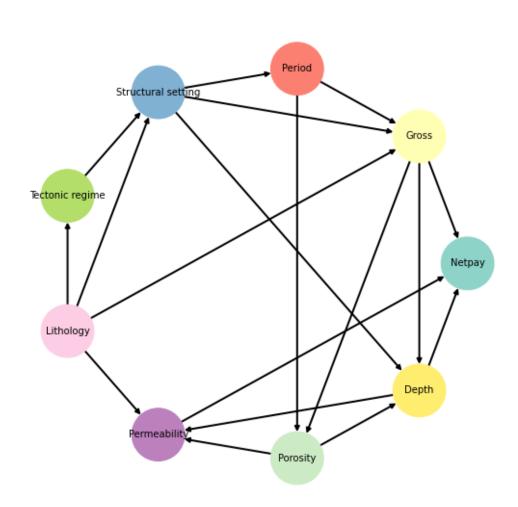
actual generation num = 20

Nodes: [Netpay, Gross, Period, Structural setting, Tectonic regime, Lithology,

Permeability, Porosity, Depth]

Edges: [('Gross', 'Netpay'), ('Gross', 'Porosity'), ('Period', 'Gross'), ('Period', 'Lithology'), ('Period', 'Porosity'), ('Structural setting', 'Gross'), ('Structural setting', 'Period'), ('Structural setting', 'Lithology'), ('Structural setting', 'Depth'), ('Tectonic regime', 'Structural setting'), ('Lithology', 'Gross'), ('Lithology', 'Permeability'), ('Permeability', 'Netpay'), ('Porosity', 'Permeability'), ('Porosity', 'Depth', 'Permeability')]

Current graph



pop size = 10

mutation prob = 0.9

genetic_scheme_type = GeneticSchemeTypesEnum.steady_state

selection_types = SelectionTypesEnum.tournament

mutation_types [<function reverse mutation at 0x0000020FD2F5DD30>. <function single_edge_mutation at 0x0000020FD2F5DCA0>1

crossover_types = [<function custom_crossover at 0x0000020FD2F5DB80>1 stopping_after_n_generation = 10

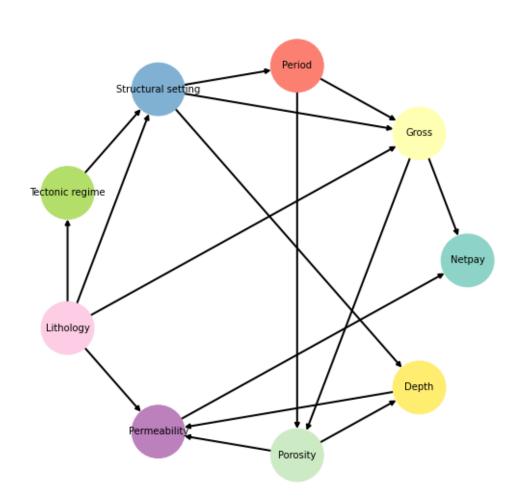
actual generation num = 15

Nodes: [Netpay, Gross, Period, Structural setting, Tectonic regime, Lithology,

Permeability, Porosity, Depth]

Edges: [('Gross', 'Netpay'), ('Gross', 'Porosity'), ('Period', 'Gross'), ('Period', 'Porosity'), ('Structural setting', 'Gross'), ('Structural setting', 'Period'), ('Structural setting', 'Depth'), ('Tectonic regime', 'Structural setting'), ('Lithology', 'Gross'), ('Lithology', 'Structural setting'), ('Lithology', 'Tectonic regime'), ('Lithology', 'Grossity', 'Derosity', 'Grossity', 'Represity', 'Grossity', 'Gro 'Permeability'), ('Permeability', 'Netpay'), ('Porosity', 'Permeability'), ('Porosity', 'Depth'), ('Depth', 'Permeability')]

Current graph



 $mutation_prob = 0.9$

genetic_scheme_type = GeneticSchemeTypesEnum.steady_state

selection_types = SelectionTypesEnum.tournament

mutation_types = [<function reverse_mutation at 0x0000020FD2F5DD30>, <function single_edge_mutation at 0x0000020FD2F5DCA0>]

crossover_types = [<function custom_crossover at 0x0000020FD2F5DB80>]

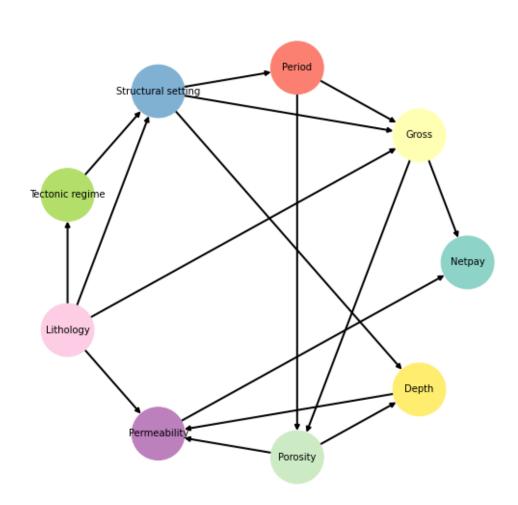
stopping_after_n_generation = 10

actual_generation_num = 22

Nodes: [Netpay, Gross, Period, Structural setting, Tectonic regime, Lithology,

Porosity, Depth, Permeability]

Edges: [('Gross', 'Netpay'), ('Gross', 'Permeability'), ('Period', 'Gross'), ('Period', 'Lithology'), ('Period', 'Porosity'), ('Structural setting', 'Gross'), ('Structural setting', 'Period'), ('Structural setting', 'Lithology'), ('Structural setting', 'Depth'), ('Tectonic regime', 'Structural setting'), ('Lithology', 'Gross'), ('Lithology', 'Porosity'), ('Lithology', 'Permeability'), ('Porosity', 'Gross'), ('Porosity', 'Depth'), ('Porosity', 'Permeability'), ('Depth', 'Netpay'), ('Permeability', 'Depth')]



 $\dot{m}\dot{u}\dot{t}ation_prob = 0.9$

genetic_scheme_type = GeneticSchemeTypesEnum.steady_state

selection_types = SelectionTypesEnum.tournament

mutation_types = [<function reverse_mutation at 0x0000020FD2F5DD30>, <function single_edge_mutation at 0x0000020FD2F5DCA0>]

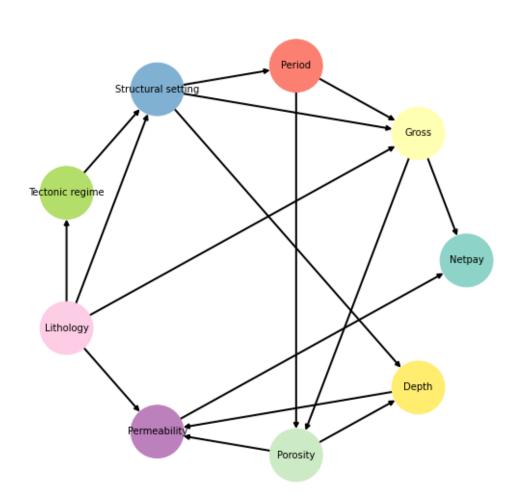
crossover_types = [<function custom_crossover at 0x0000020FD2F5DB80>] stopping_after_n_generation = 10

actual generation num = 17

Nodes: [Depth, Structural setting, Tectonic regime, Lithology, Porosity, Period,

Gross, Netpay, Permeability

Edges: [('Structural setting', 'Depth'), ('Structural setting', 'Period'), ('Structural setting', 'Gross'), ('Tectonic regime', 'Structural setting'), ('Lithology', 'Structural setting'), ('Lithology', 'Tectonic regime'), ('Lithology', 'Gross'), ('Lithology', 'Permeability'), ('Porosity', 'Depth'), ('Porosity', 'Permeability'), ('Period', 'Gross', 'Porosity'), ('Gross', 'Netpay', 'Permeability'), ('Permeability', 'Depth')]



pop_size = 10 mutation prob = 0.9

genetic_scheme_type = GeneticSchemeTypesEnum.steady_state

selection_types = SelectionTypesEnum.tournament

mutation_types = [<function reverse_mutation at 0x0000020FD2F5DD30>, <function single_edge_mutation at 0x0000020FD2F5DCA0>]

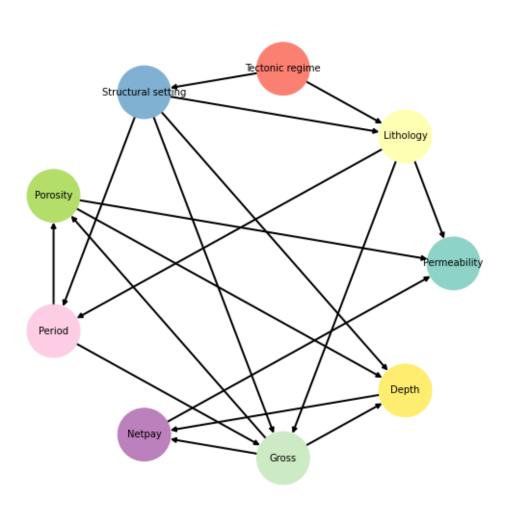
crossover_types = [<function custom_crossover at 0x0000020FD2F5DB80>] stopping_after_n_generation = 10

actual generation num = 24

Nodes: [Permeability, Lithology, Tectonic regime, Structural setting, Porosity,

Period, Netpay, Gross, Depth]

Edges: [('Lithology', 'Permeability'), ('Lithology', 'Period'), ('Lithology', 'Gross'), ('Tectonic regime', 'Lithology'), ('Tectonic regime', 'Structural setting'), ('Structural setting', 'Lithology'), ('Structural setting', 'Period'), ('Structural setting', 'Gross'), ('Structural setting', 'Depth'), ('Porosity', 'Permeability'), ('Porosity', 'Depth'), ('Period', 'Porosity'), ('Gross', 'Netpay'), ('Gross', 'Depth'), ('Depth', 'Netpay')]



 $\dot{\text{mutation}}_{\text{prob}} = 0.9$

genetic_scheme_type = GeneticSchemeTypesEnum.steady_state

selection_types = SelectionTypesEnum.tournament

mutation_types = [<function reverse_mutation at 0x0000020FD2F5DD30>, <function single_edge_mutation at 0x0000020FD2F5DCA0>]

crossover_types = [<function custom_crossover at 0x0000020FD2F5DB80>]

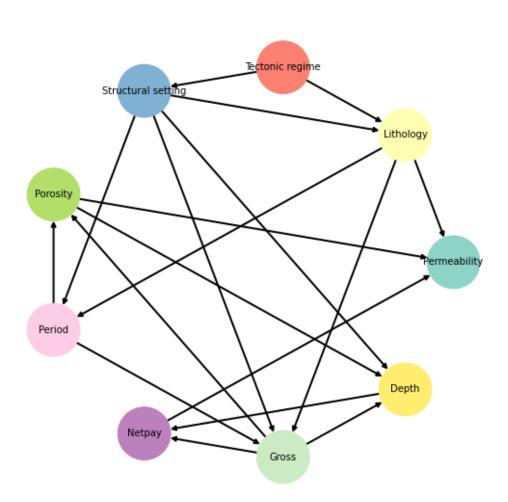
stopping_after_n_generation = 10

actual generation num = 28

Nodes: [Permeability, Lithology, Tectonic regime, Porosity, Period, Structural

setting, Netpay, Gross, Depth]

Edges: [('Lithology', 'Permeability'), ('Lithology', 'Period'), ('Lithology', 'Structural setting'), ('Lithology', 'Gross'), ('Tectonic regime', 'Lithology'), ('Tectonic regime', 'Structural setting'), ('Porosity', 'Permeability'), ('Porosity', 'Netpay'), ('Porosity', 'Gross'), ('Porosity', 'Depth'), ('Period', 'Porosity'), ('Period', 'Gross'), ('Structural setting', 'Depth'), ('Netpay', 'Permeability'), ('Gross', 'Netpay'), ('Gross', 'Depth'), ('Depth', 'Permeability'), ('Depth', 'Netpay')]



pop size = 10

mutation prob = 0.9

genetic_scheme_type = GeneticSchemeTypesEnum.steady_state

selection_types = SelectionTypesEnum.tournament

mutation types [<function reverse mutation at single_edge_mutation 0x0000020FD2F5DD30>. <function at 0x0000020FD2F5DCA0>1

crossover_types = [<function custom_crossover at 0x0000020FD2F5DB80>1

stopping_after_n_generation = 10

actual generation num = 29

Nodes: [Depth, Structural setting, Tectonic regime, Porosity, Period, Lithology,

Permeability, Gross, Netpayl

Edges: [('Structural setting', 'Depth'), ('Structural setting', 'Period'), ('Structural setting', 'Lithology'), ('Structural setting', 'Gross'), ('Tectonic regime', 'Structural setting'), ('Porosity', 'Depth'), ('Porosity', 'Permeability'), ('Porosity', 'Gross'), ('Lithology', 'Porosity'), ('Lithology', 'Porosity'), ('Lithology', 'Gross'), ('Cross', 'Depth'), ('Cr ('Permeability', 'Netpay'), ('Gross', 'Permeability'), ('Permeability', 'Depth'), ('Gross', 'Netpay'), ('Netpay', 'Depth')]

