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1. Transcritical Flow
 2. Hydraulic Shock
 3. State Variable

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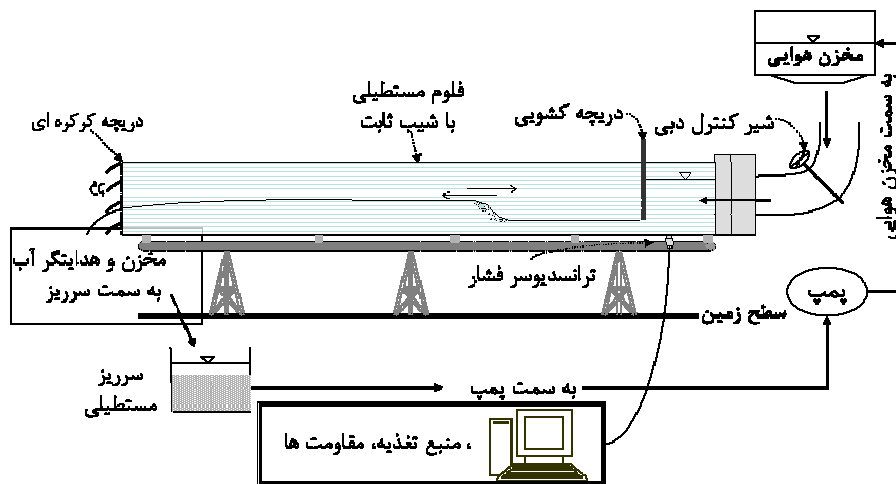
A/D Advantech PCL818

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- 3. Tail Gate with Rotating Flaps
- 4. Pressure Transducer
- 5. Full Scale
- 6. Analogue/Digital Cart

- 1. Artificial Neural Network (ANN)
- 2. Genetic Algorithm (GAs)



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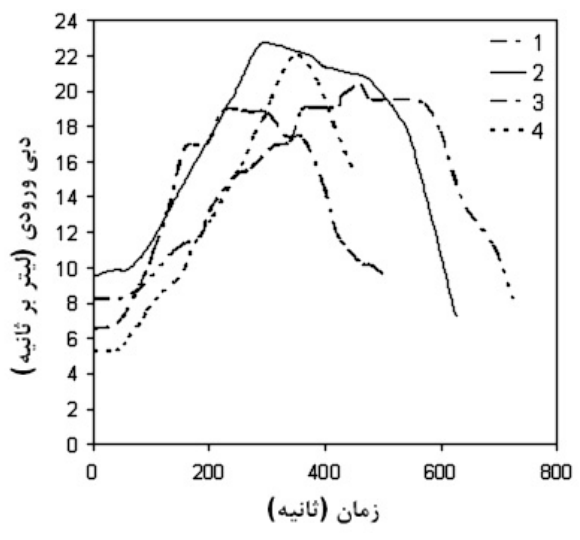
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1. Perceptron
 2. Transfer Function
 3. Feed Forward
 4. Multilayer Perceptron (MLP)
 5. Back Propagation Error
 6. Reproduction



- 4. Training
- 5. Testing

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$(x_2 \ x_1)$ $(y_2 \ y_1)$

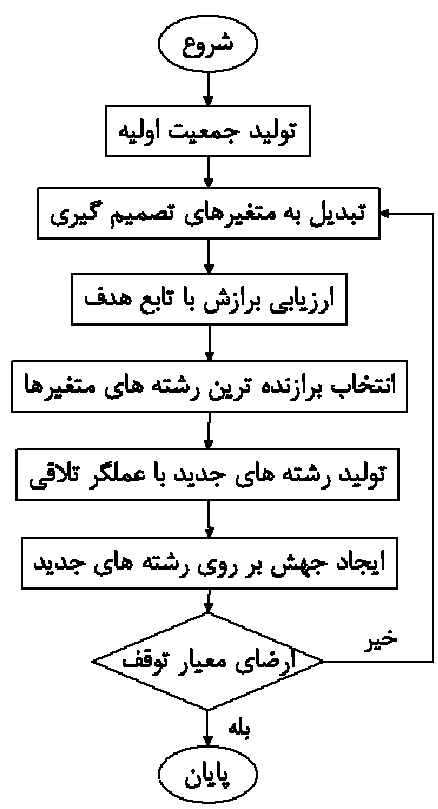
y

x $Q=Q(t)$

F y

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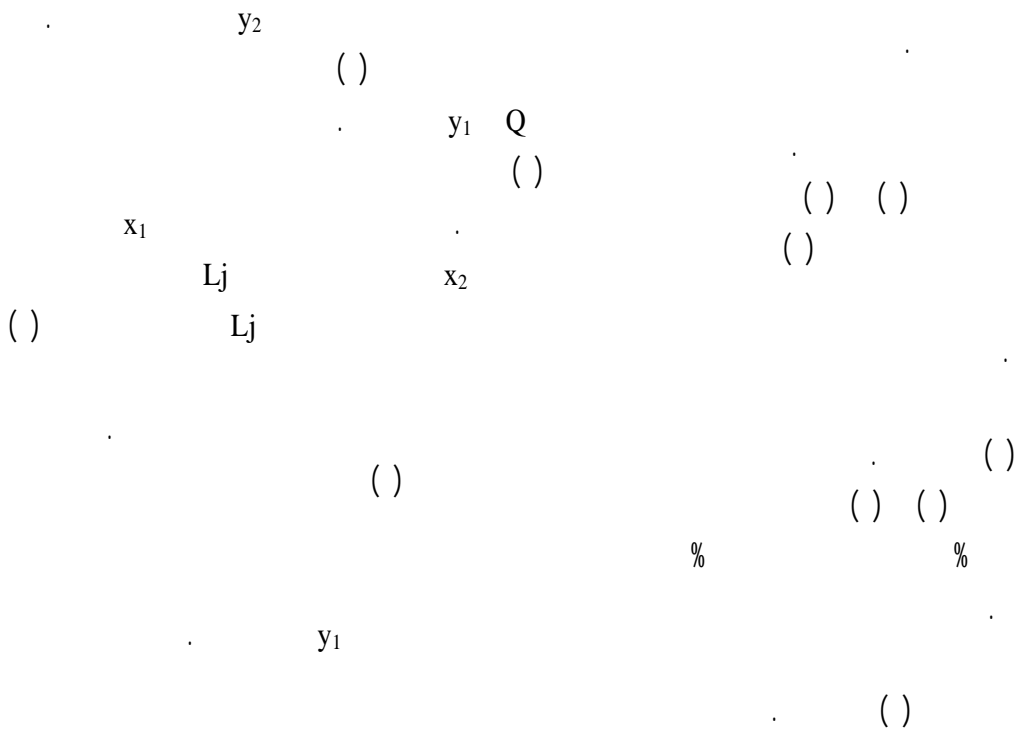
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- 1. Cross over
- 2. Mutation
- 3. Fitness Function

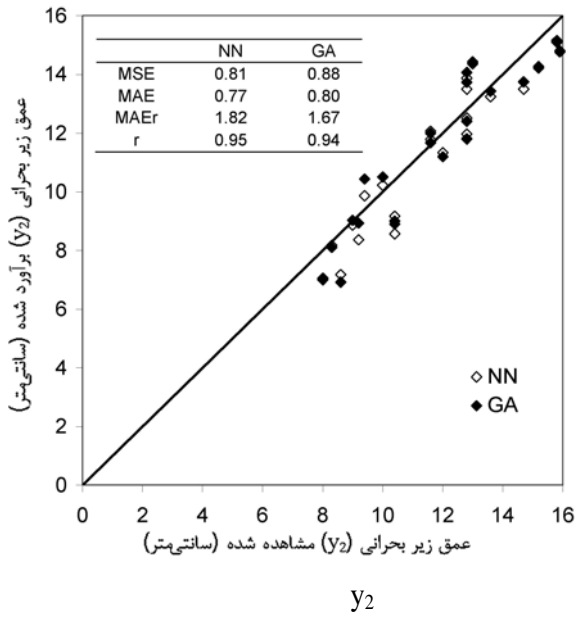
Q, y ₁	y ₂
Q, y ₂ , x ₁	x ₂ , L _j
Q, F ₁	x ₁



Time	Q	y ₁	y ₂	x ₁	x ₂	L _j
(S)	(l/S)	(cm)	(cm)	(cm)	(cm)	(cm)

1. Epochs
2. Randomization

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NN

GA

(r) (MAE) (MSE)
(MAEr)

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y2

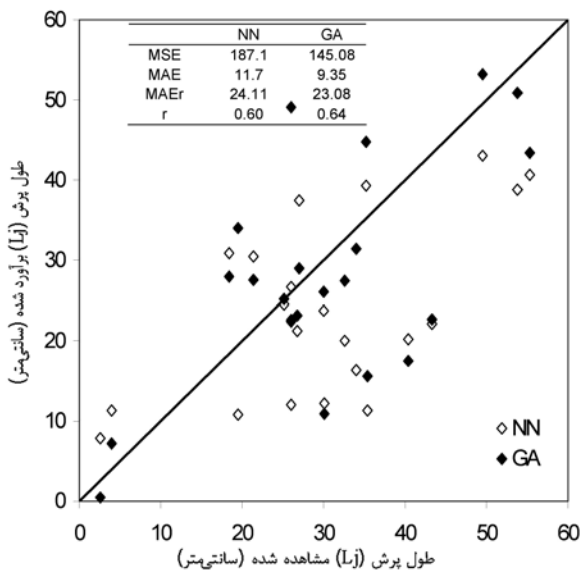
y2

()

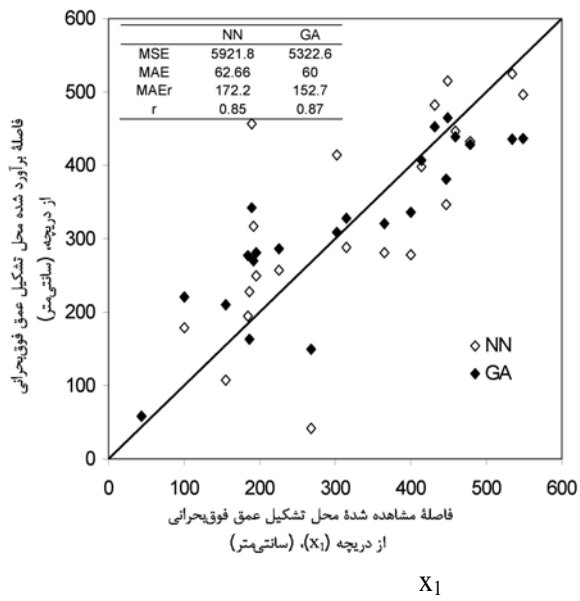
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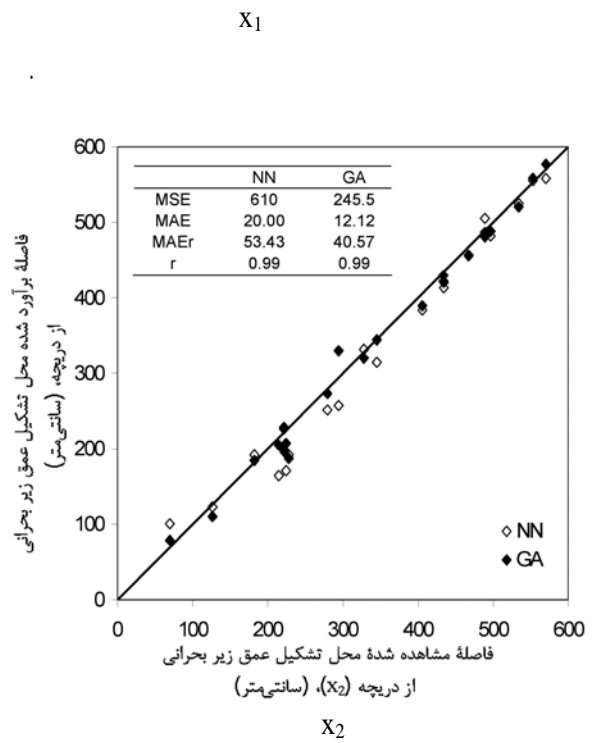
1. Mean Square Error
2. Mean Absolute Error
3. Maximum Absolute Error
4. Linear Correlation Coefficient
5. Uniform Mutation
6. Processing Element (PE)



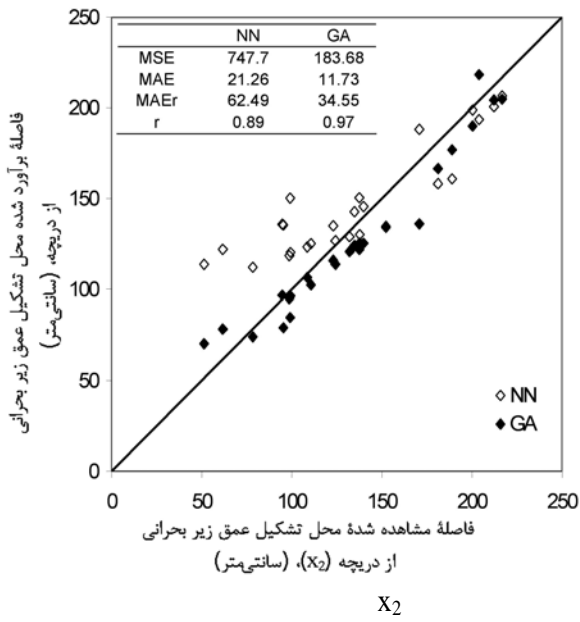
X_1
 X_2



$(F_1 \quad Q)$
 (\quad)
 (\quad)



(\quad)
 (\quad)
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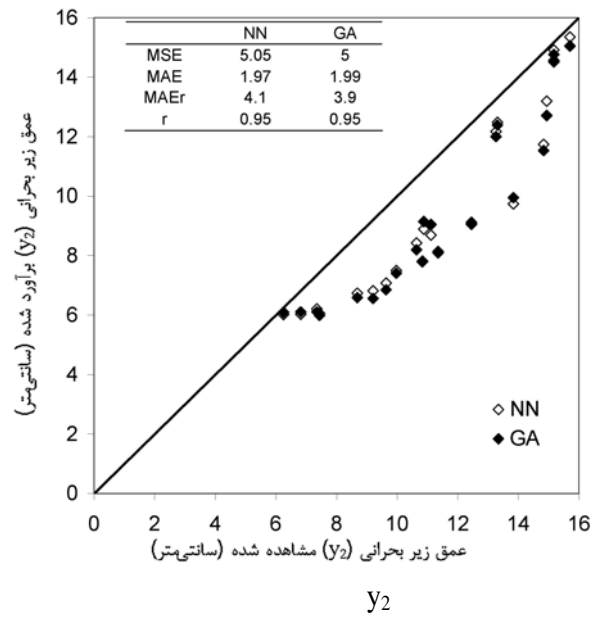
y_2

() ()

x_2 () (Lj)

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() (x_1) ()



() ()

() ()

y_2 y_1

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