Рис. 1: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.001

Data	Models	MAPE target	MAPE full	AIC
1	VAR	2244132.943	2244132.943	811.739
	SVR	0.713	0.713	44.174
	Neural network	0.515	0.515	16.587
2	VAR	59512.325	59512.325	616.239
	SVR	0.250	0.250	-7.057
	Neural network	0.422	0.422	1.719
3	VAR	4862.349	4862.349	453.302
	SVR	1.364	1.364	35.201
	Neural network	1.205	1.205	11.296
4	VAR	75323.756	75323.756	613.935
	SVR	0.487	0.487	23.166
	Neural network	0.354	0.354	-19.361
5	VAR	146356.706	146356.706	522.915
	SVR	13.878	13.878	47.671
	Neural network	13.507	13.507	10.257
6	VAR	2296.411	2296.411	390.356
	SVR	1.950	1.950	18.052
	Neural network	1.512	1.512	12.048
7	VAR	Inf	Inf	458.770
	SVR	Inf	Inf	9.200
	Neural network	Inf	Inf	8.959
8	VAR	Inf	Inf	605.314
	SVR	Inf	Inf	25.843
	Neural network	Inf	Inf	-3.081

	VAR	138624.940	138624.940	617.297
9	SVR	1.978	1.978	35.206
	Neural network	0.813	0.813	-9.727
	VAR	96419.370	96419.370	661.069
10	SVR	0.243	0.243	10.095
	Neural network	0.395	0.395	19.026
	VAR	7905964705186.403	7905964705186.403	1618.745
11	SVR	0.442	0.442	45.045
	Neural network	0.483	0.483	42.987
	VAR	46994.735	46994.735	635.900
12	SVR	0.284	0.284	10.540
	Neural network	0.271	0.271	12.987
	VAR	75134.487	75134.487	650.046
13	SVR	0.401	0.401	23.554
	Neural network	0.219	0.219	-3.414
	VAR	Inf	Inf	911.957
14	SVR	Inf	Inf	123.086
	Neural network	Inf	Inf	33.094
	VAR	43751.223	43751.223	564.154
15	SVR	2.555	2.555	54.162
	Neural network	2.096	2.096	45.933
	VAR	57980.993	57980.993	580.396
16	SVR	3.577	3.577	81.384
	Neural network	2.634	2.634	44.805
	VAR	322034889714643.750	322034889714643.750	1756.667
17	SVR	2.157	2.157	70.210
	Neural network	0.610	0.610	18.076
	VAR	36389.982	36389.982	548.314
18	SVR	0.861	0.861	7.488
	Neural network	1.152	1.152	8.977
	VAR	Inf	Inf	590.470
19	SVR	Inf	Inf	23.983
	Neural network	Inf	Inf	41.893
	VAR	5964867.711	5964867.711	679.749
20	SVR	12.556	12.556	-24.338
	Neural network	19.170	19.170	21.487
	VAR	Inf	Inf	597.962
21	SVR	Inf	Inf	-22.045
	Neural network	Inf	Inf	-6.559
	VAR	44409.918	44409.918	580.243
22	SVR	0.622	0.622	8.462

	Neural network	0.549	0.549	15.020
	VAR	Inf	Inf	630.365
23	SVR	Inf	Inf	15.772
	Neural network	Inf	Inf	8.344
	VAR	80742.247	80742.247	639.195
24	SVR	0.798	0.798	51.505
	Neural network	0.611	0.611	29.782
	VAR	20393.106	20393.106	482.275
25	SVR	2.267	2.267	14.328
	Neural network	1.166	1.166	-1.542
	VAR	8482.924	8482.924	529.197
26	SVR	0.507	0.507	28.799
	Neural network	0.482	0.482	31.069
	VAR	45181.932	45181.932	607.146
27	SVR	0.281	0.281	1.000
	Neural network	0.313	0.313	7.219
	VAR	16410.538	16410.538	520.691
28	SVR	1.404	1.404	70.492
	Neural network	1.649	1.649	34.516
	VAR	284039.993	284039.993	667.835
29	SVR	4.606	4.606	92.863
	Neural network	1.975	1.975	45.152
	VAR	23416.014	23416.014	595.365
30	SVR	0.369	0.369	26.749
	Neural network	0.308	0.308	31.021
	VAR	4995.828	4995.828	422.903
31	SVR	1.156	1.156	3.074
	Neural network	1.253	1.253	2.091
	VAR	1834691.811	1834691.811	792.360
32	SVR	0.343	0.343	-12.641
	Neural network	0.314	0.314	-11.337
	VAR	2922971577149559.500	2922971577149559.500	1905.789
33	SVR	0.211	0.211	8.630
	Neural network	0.402	0.402	17.697
	VAR	61285.961	61285.961	600.039
34	SVR	1.950	1.950	76.995
	Neural network	1.232	1.232	34.307
	VAR	3700.075	3700.075	425.563
35	SVR	2.397	2.397	46.433
	Neural network	1.415	1.415	8.741
	VAR	24594.108	24594.108	570.064
36	SVR	0.546	0.546	22.076

	Neural network	0.448	0.448	3.003
37	VAR	271809.040	271809.040	676.119
	SVR	0.898	0.898	26.261
	Neural network	0.570	0.570	-4.491
38	VAR	253092.604	253092.604	711.732
	SVR	0.634	0.634	63.735
	Neural network	0.170	0.170	-14.327
39	VAR	Inf	Inf	941.146
	SVR	Inf	Inf	38.441
	Neural network	Inf	Inf	54.101
40	VAR	Inf	Inf	453.835
	SVR	Inf	Inf	21.903
	Neural network	Inf	Inf	22.089
41	VAR	12709249.289	12709249.289	878.738
	SVR	1.994	1.994	61.037
	Neural network	1.750	1.750	47.431
42	VAR	39191.329	39191.329	602.449
	SVR	0.470	0.470	33.603
	Neural network	0.420	0.420	19.790
43	VAR	25110.046	25110.046	538.316
	SVR	1.078	1.078	13.247
	Neural network	1.208	1.208	14.136
44	VAR	290198.005	290198.005	698.031
	SVR	0.695	0.695	33.019
	Neural network	0.510	0.510	21.955
45	VAR	44414.158	44414.158	579.707
	SVR	0.383	0.383	10.042
	Neural network	0.708	0.708	5.999
46	VAR	26576.715	26576.715	514.773
	SVR	0.812	0.812	-20.764
	Neural network	1.042	1.042	-8.542
47	VAR	1744.906	1744.906	421.761
	SVR	0.534	0.534	-0.642
	Neural network	0.493	0.493	-3.862
48	VAR	697904.925	697904.925	726.495
	SVR	1.937	1.937	77.939
	Neural network	1.197	1.197	38.306
49	VAR	Inf	Inf	566.714
	SVR	Inf	Inf	21.045
	Neural network	Inf	Inf	22.780
50	VAR	6526527.821	6526527.821	864.252
	SVR	1.150	1.150	57.144

	Neural network	0.490	0.490	10.095
	VAR	317086.758	317086.758	1593.086
51	SVR	0.643	0.643	5.938
	Neural network	0.172	0.172	-149.502
	VAR	147533.058	147533.058	1622.999
52	SVR	0.382	0.382	-7.225
	Neural network	0.100	0.100	-110.002
	VAR	74725.663	74725.663	1561.715
53	SVR	0.178	0.178	-40.381
	Neural network	0.142	0.142	-104.994
	VAR	6769.409	6769.409	1196.017
54	SVR	0.493	0.493	-33.663
	Neural network	0.474	0.474	-36.299
	VAR	46190.148	46190.148	1484.918
55	SVR	0.137	0.137	-112.725
	Neural network	0.102	0.102	-128.598
	VAR	18569.063	18569.063	1312.615
56	SVR	0.323	0.323	-39.862
	Neural network	0.220	0.220	-114.167
	VAR	29979.320	29979.320	1289.178
57	SVR	1.672	1.672	84.519
	Neural network	0.266	0.266	-85.684
	VAR	104753.457	104753.457	1560.842
58	SVR	0.143	0.143	-84.610
	Neural network	0.108	0.108	-116.070
	VAR	1317806108823536.700	1317806108823536.700	3911.142
59	SVR	1.664	1.664	-122.050
	Neural network	0.159	0.159	-347.858
	VAR	22514.514	22514.514	1305.469
60	SVR	0.245	0.245	-141.096
	Neural network	0.217	0.217	-149.025
	VAR	196039.433	196039.433	1429.546
61	SVR	0.706	0.706	-169.891
	Neural network	1.496	1.496	-103.774
	VAR	16695.825	16695.825	1319.067
62	SVR	0.574	0.574	61.403
	Neural network	0.438	0.438	45.443
	VAR	77978.680	77978.680	1398.504
63	SVR	1.217	1.217	-32.614
	Neural network	0.761	0.761	-107.965
	VAR	457700.481	457700.481	1522.026
64	SVR	0.416	0.416	-91.842

	Neural network	0.132	0.132	-219.605
65	VAR	92251.395	92251.395	1533.899
	SVR	0.191	0.191	-122.829
	Neural network	0.366	0.366	-43.262
66	VAR	44375.724	44375.724	1436.036
	SVR	0.071	0.071	-229.958
	Neural network	0.140	0.140	-155.141
67	VAR	24997.342	24997.342	1216.119
	SVR	1.810	1.810	4.531
	Neural network	1.538	1.538	-69.141
68	VAR	5956229775101611.000	5956229775101611.000	4354.643
	SVR	0.832	0.832	-101.604
	Neural network	0.276	0.276	-191.209
69	VAR	31085627649486276.000	31085627649486276.000	4528.761
	SVR	0.631	0.631	-151.944
	Neural network	0.410	0.410	-201.702
70	VAR	2037039261998861.200	2037039261998861.200	4165.787
	SVR	0.615	0.615	-92.852
	Neural network	0.498	0.498	-179.521
71	VAR	2085.653	2085.653	774.819
	SVR	2.305	2.305	-70.030
	Neural network	3.051	3.051	-89.866
72	VAR	77047.453	77047.453	1452.703
	SVR	0.695	0.695	13.230
	Neural network	0.457	0.457	-63.611
73	VAR	1197719.887	1197719.887	1893.772
	SVR	0.108	0.108	-144.943
	Neural network	0.194	0.194	-68.070
74	VAR	900286.100	900286.100	1756.563
	SVR	0.163	0.163	-197.107
	Neural network	0.157	0.157	-207.891
75	VAR	8130.015	8130.015	1263.782
	SVR	0.209	0.209	-63.401
	Neural network	0.164	0.164	-64.975
76	VAR	4476555826064240.500	4476555826064240.500	4675.016
	SVR	0.330	0.330	1.566
	Neural network	0.233	0.233	-39.198
77	VAR	440063.011	440063.011	1811.549
	SVR	0.111	0.111	-117.173
	Neural network	0.011	0.011	-403.892
78	VAR	48532.162	48532.162	1445.535
	SVR	0.285	0.285	-39.908

	Neural network	0.329	0.329	-54.806
79	VAR	Inf	Inf	1264.630
	SVR	Inf	Inf	-51.438
	Neural network	Inf	Inf	-82.278
80	VAR	Inf	Inf	4901.508
	SVR	Inf	Inf	23.132
	Neural network	Inf	Inf	-18.896
81	VAR	68805.301	68805.301	1536.567
	SVR	0.412	0.412	66.741
	Neural network	0.343	0.343	19.307
82	VAR	221335.665	221335.665	1576.676
	SVR	0.211	0.211	-37.959
	Neural network	0.133	0.133	-77.885
83	VAR	Inf	Inf	1284.412
	SVR	Inf	Inf	12.130
	Neural network	Inf	Inf	-138.909
84	VAR	148985.166	148985.166	1568.227
	SVR	0.134	0.134	-115.772
	Neural network	0.074	0.074	-200.381
85	VAR	2023.760	2023.760	1029.828
	SVR	0.233	0.233	-100.163
	Neural network	0.173	0.173	-102.993
86	VAR	1033277.634	1033277.634	1835.499
	SVR	0.418	0.418	-29.382
	Neural network	0.211	0.211	-103.808
87	VAR	11034958895749192.000	11034958895749192.000	4445.725
	SVR	0.175	0.175	-242.550
	Neural network	0.094	0.094	-325.432
88	VAR	573624588592290.870	573624588592290.870	2760.612
	SVR	0.121	0.121	-88.983
	Neural network	0.214	0.214	-36.741
89	VAR	547140059276880.810	547140059276880.810	4432.495
	SVR	0.204	0.204	-55.970
	Neural network	0.082	0.082	-159.765
90	VAR	115818.356	115818.356	1507.188
	SVR	0.604	0.604	1.512
	Neural network	0.250	0.250	-124.933
91	VAR	2153350236.078	2153350236.078	2616.367
	SVR	0.184	0.184	-95.330
	Neural network	0.028	0.028	-296.525
92	VAR	184408.184	184408.184	1443.444
	SVR	0.239	0.239	-115.448

	Neural network	0.096	0.096	-214.885
	VAR	10932.236	10932.236	1229.979
93	SVR	0.364	0.364	-63.363
	Neural network	0.277	0.277	-90.743
	VAR	461528.674	461528.674	1603.716
94	SVR	0.181	0.181	-82.061
	Neural network	0.060	0.060	-242.538
	VAR	8039.669	8039.669	1229.333
95	SVR	0.191	0.191	-79.273
	Neural network	0.309	0.309	-53.725
	VAR	6805.597	6805.597	1154.959
96	SVR	1.136	1.136	100.551
	Neural network	0.678	0.678	7.000
	VAR	32365.224	32365.224	1400.183
97	SVR	0.643	0.643	44.877
	Neural network	0.381	0.381	-19.549
	VAR	1823.906	1823.906	1029.916
98	SVR	0.401	0.401	-6.579
	Neural network	0.294	0.294	-63.308
	VAR	291339.249	291339.249	1187.151
99	SVR	6.392	6.392	38.248
	Neural network	10.961	10.961	-29.326
	VAR	206452.553	206452.553	1433.995
100	SVR	0.128	0.128	-217.308
	Neural network	0.074	0.074	-269.755
	VAR	163882067.157	163882067.157	2520.859
101	SVR	0.088	0.088	-168.295
	Neural network	0.081	0.081	-163.774
	VAR	529662.774	529662.774	1617.544
102	SVR	0.907	0.907	-140.017
	Neural network	0.130	0.130	-178.316
	VAR	3048991531972548.000	3048991531972548.000	4397.028
103	SVR	0.355	0.355	-135.970
	Neural network	3.557	3.557	16.557
	VAR	17476799.120	17476799.120	2014.123
104	SVR	0.099	0.099	-148.319
	Neural network	0.082	0.082	-159.580
	VAR	17330.207	17330.207	1329.910
105	SVR	0.077	0.077	-203.289
	Neural network	0.113	0.113	-154.928
	VAR	24233.470	24233.470	1339.884
106	SVR	0.187	0.187	-141.145

	Neural network	0.195	0.195	-141.720
107	VAR	Inf	Inf	1477.138
	SVR	Inf	Inf	-174.313
	Neural network	Inf	Inf	-217.391
108	VAR	210.419	210.419	677.324
	SVR	0.251	0.251	-69.813
	Neural network	0.216	0.216	-82.216
109	VAR	732772.769	732772.769	1495.392
	SVR	0.404	0.404	-266.485
	Neural network	0.124	0.124	-415.222
110	VAR	504264346810632.000	504264346810632.000	4234.532
	SVR	0.308	0.308	-201.718
	Neural network	0.284	0.284	-203.809
111	VAR	8539.346	8539.346	1072.001
	SVR	0.498	0.498	-95.686
	Neural network	1.070	1.070	-17.645
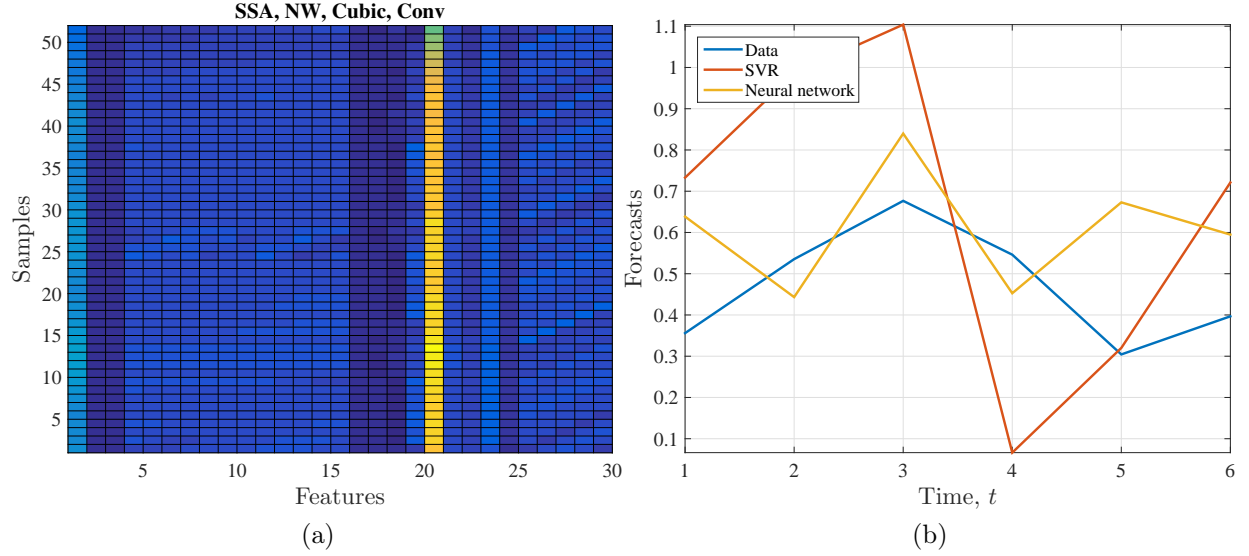
Рис. 2: (a) Feature generation results for NN3.001. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.001. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
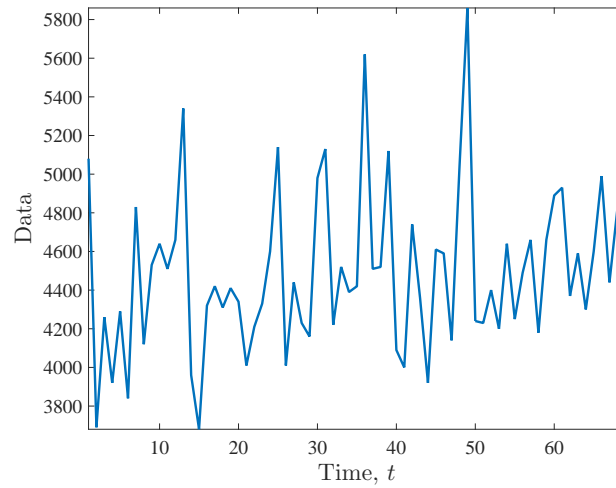
Рис. 3: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.002
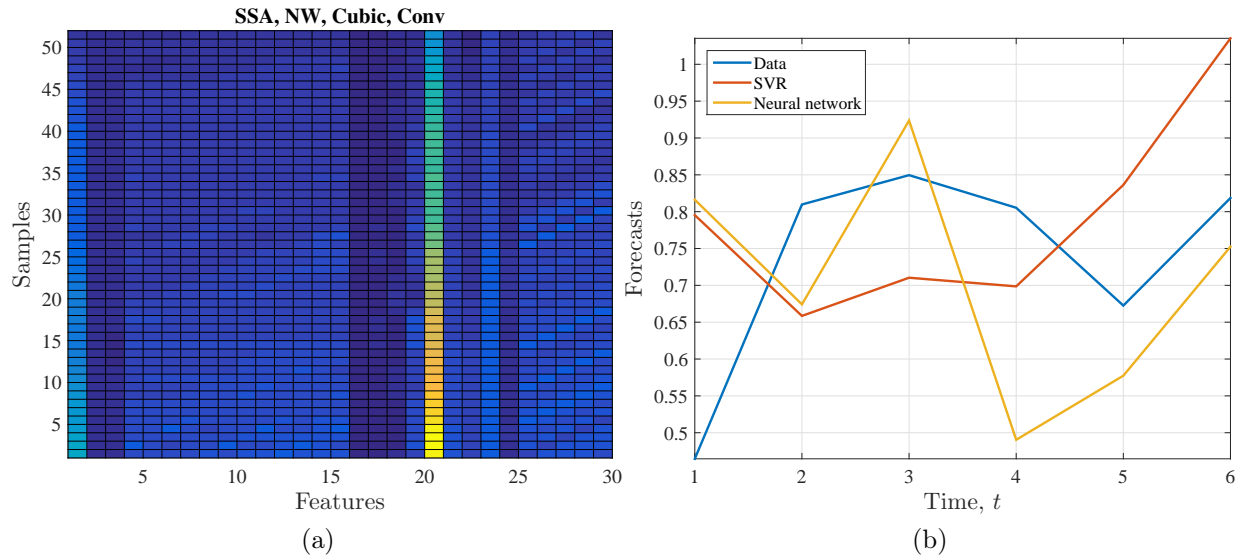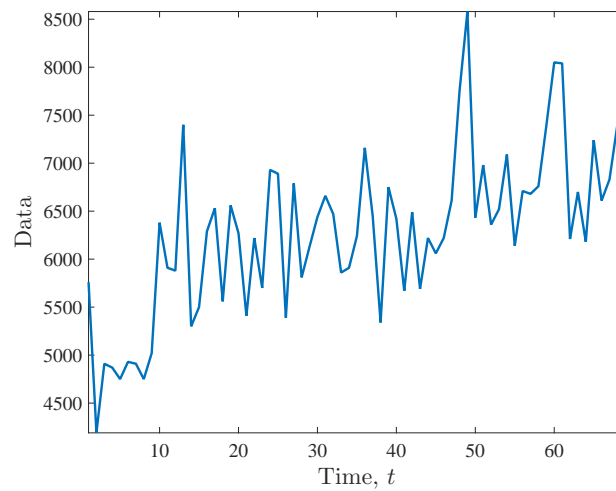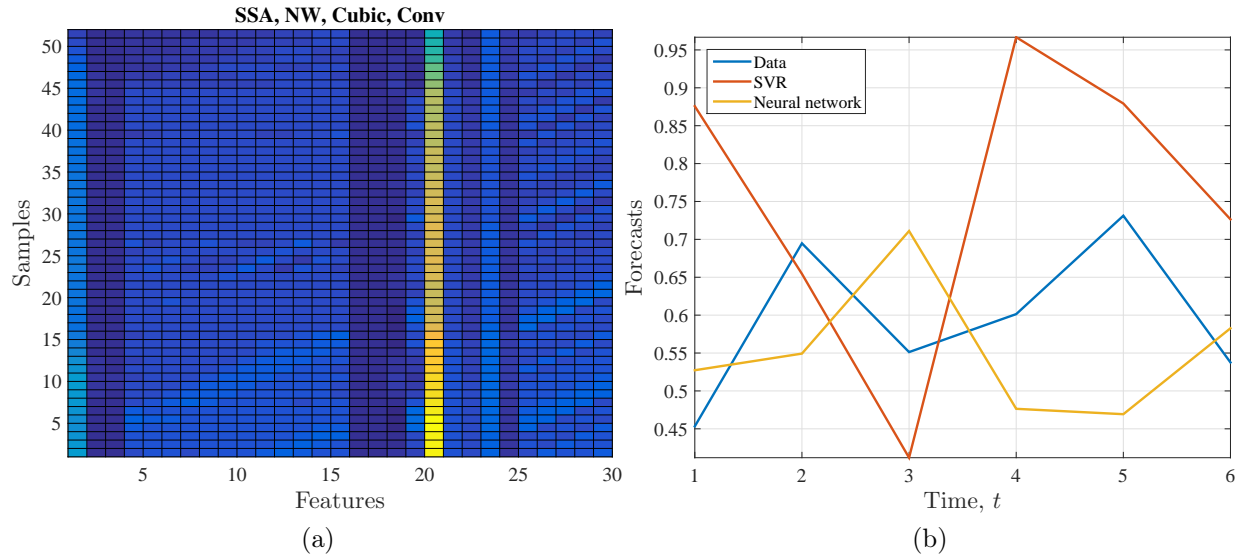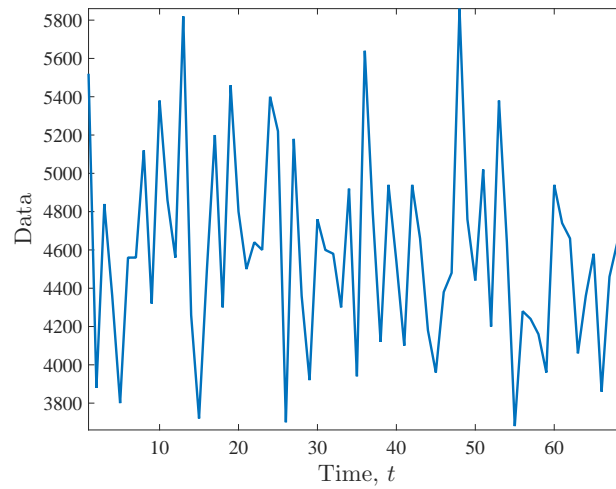
(a)

(b)
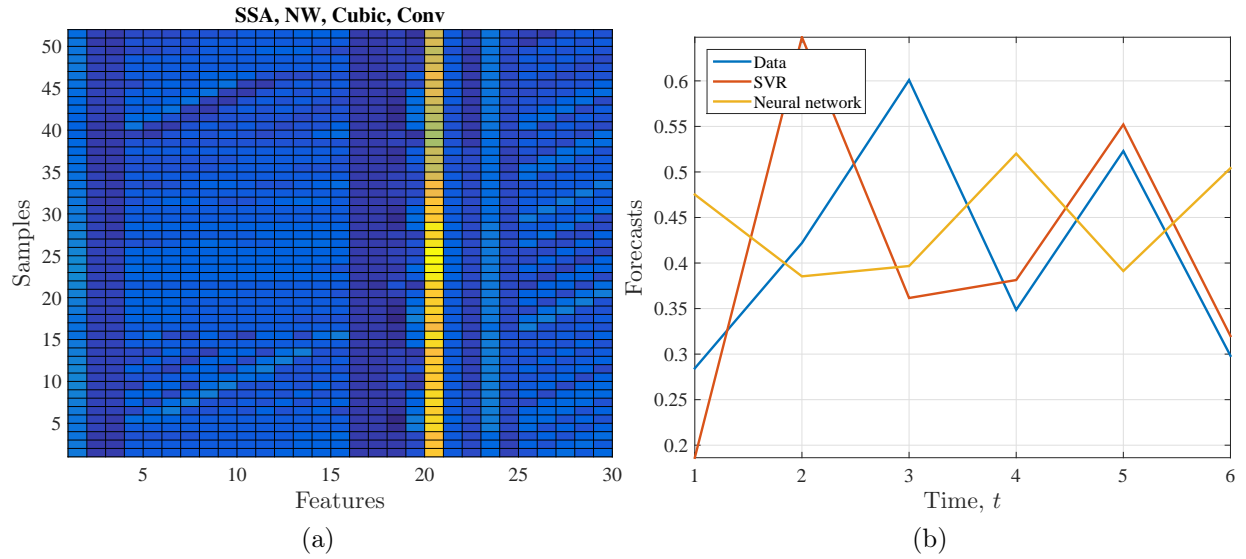
Рис. 4: (a) Feature generation results for NN3.002. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.002. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
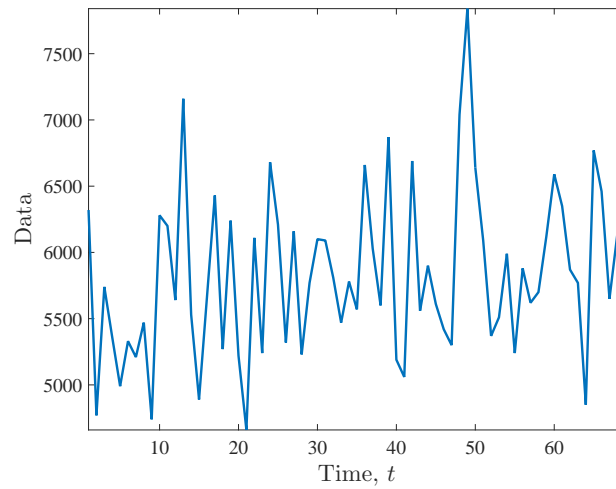
Рис. 5: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.003
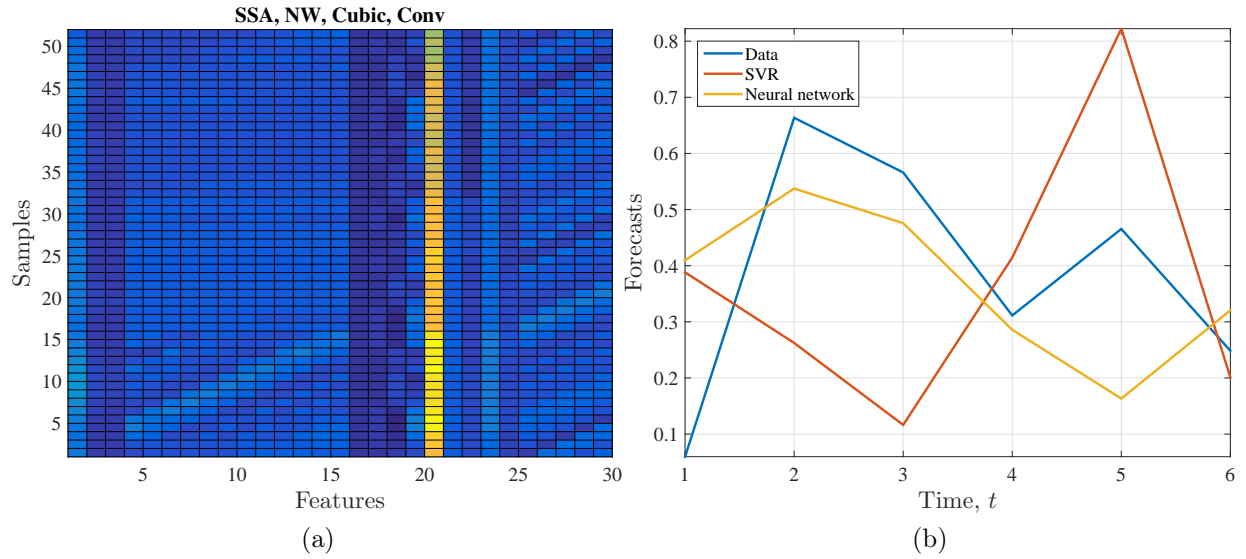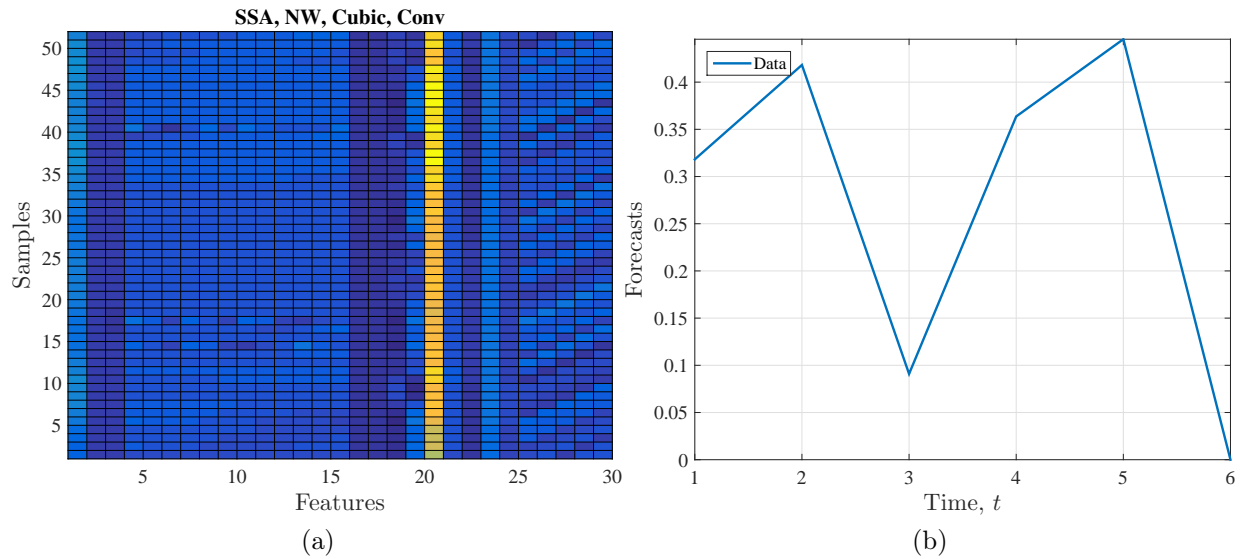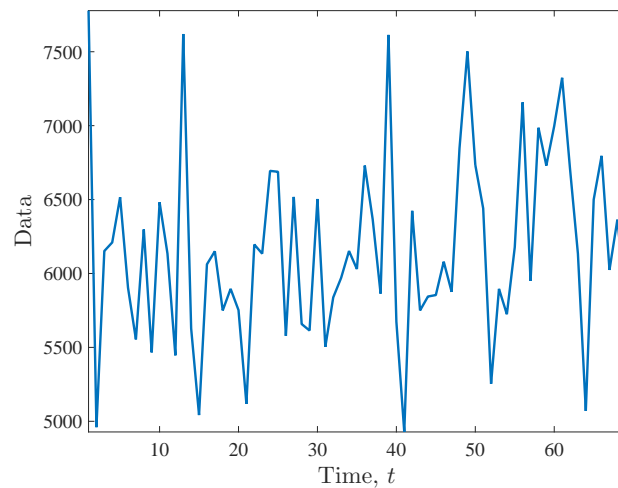
Рис. 6: (a) Feature generation results for NN3.003. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.003. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
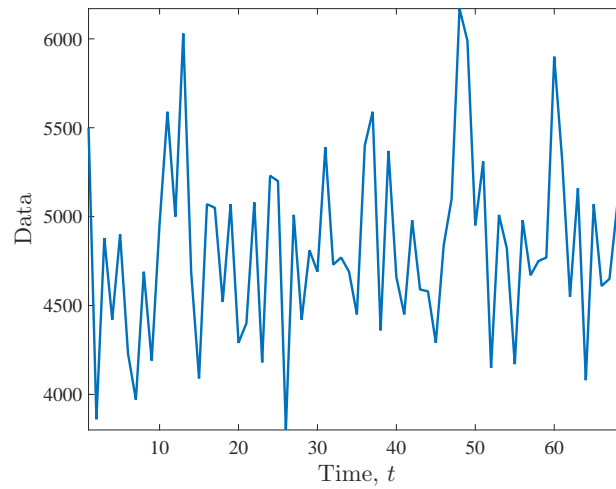
Рис. 7: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.004
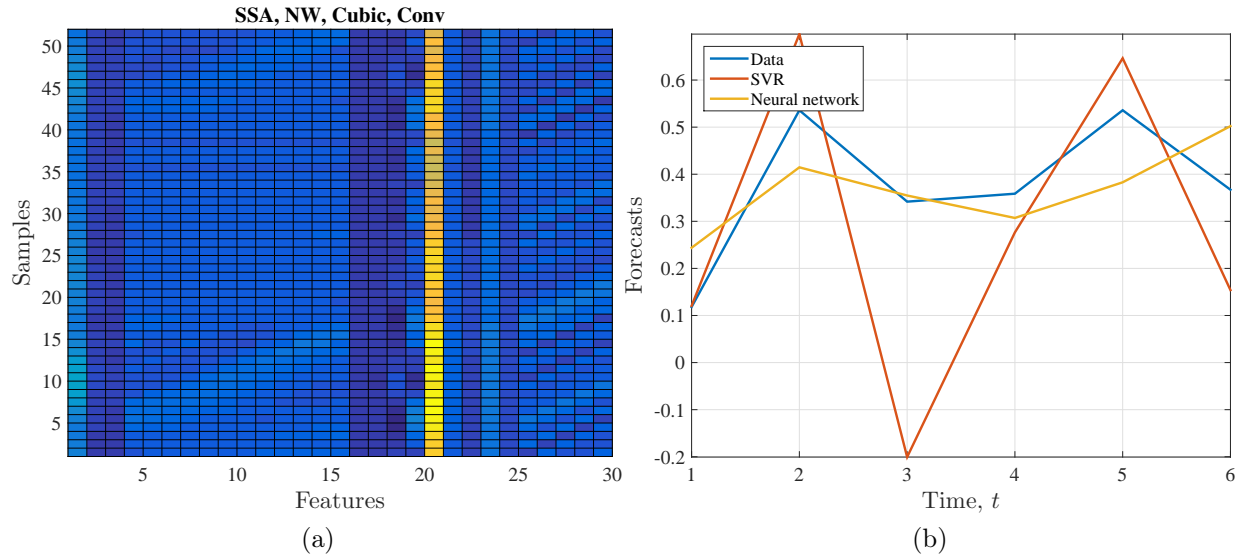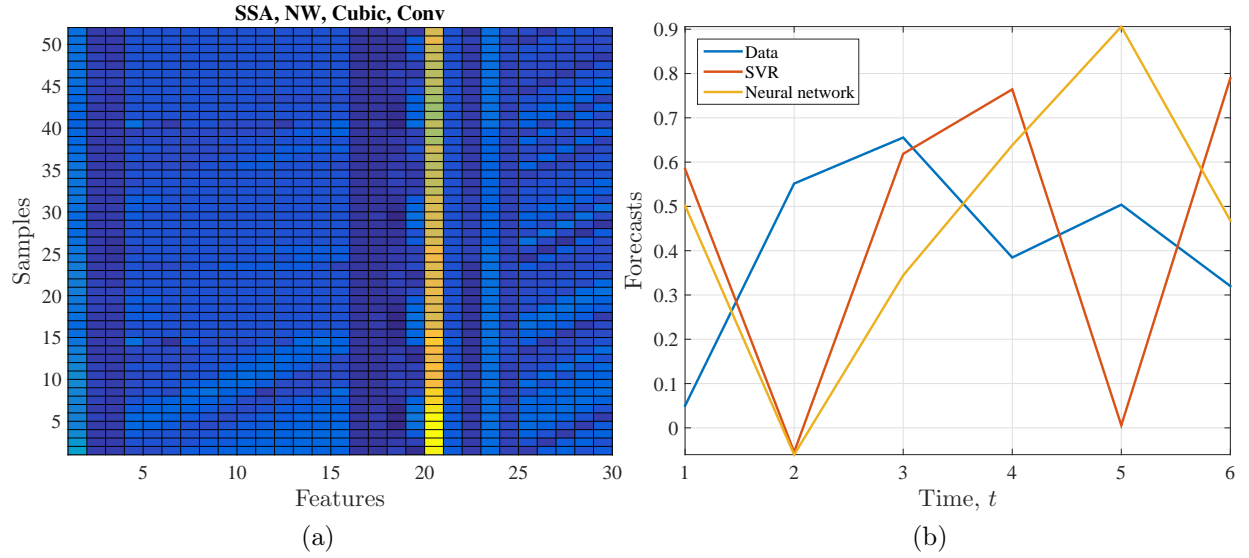
Рис. 8: (a) Feature generation results for NN3.004. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.004. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
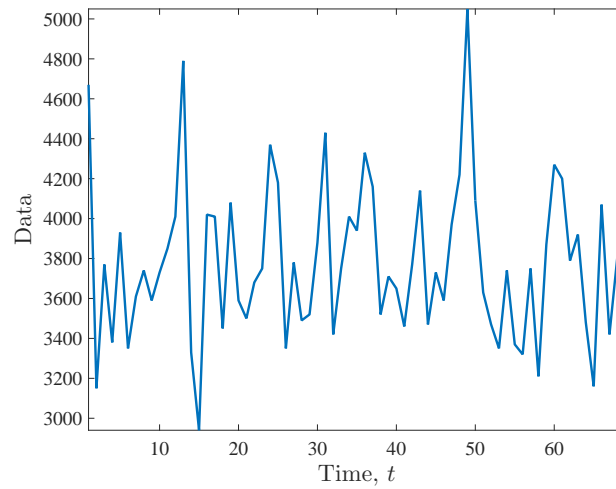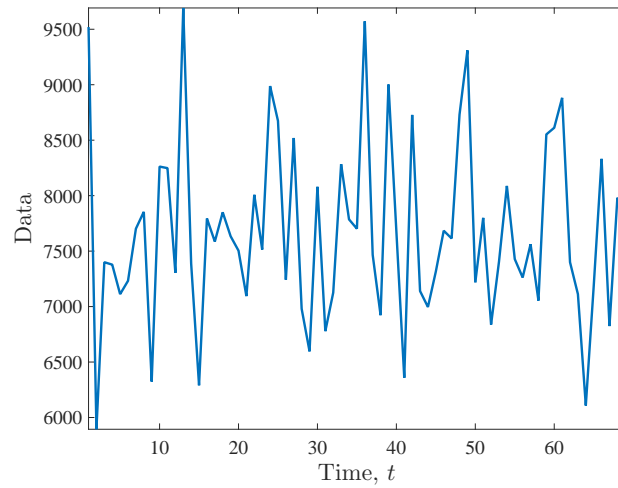

Рис. 9: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.005
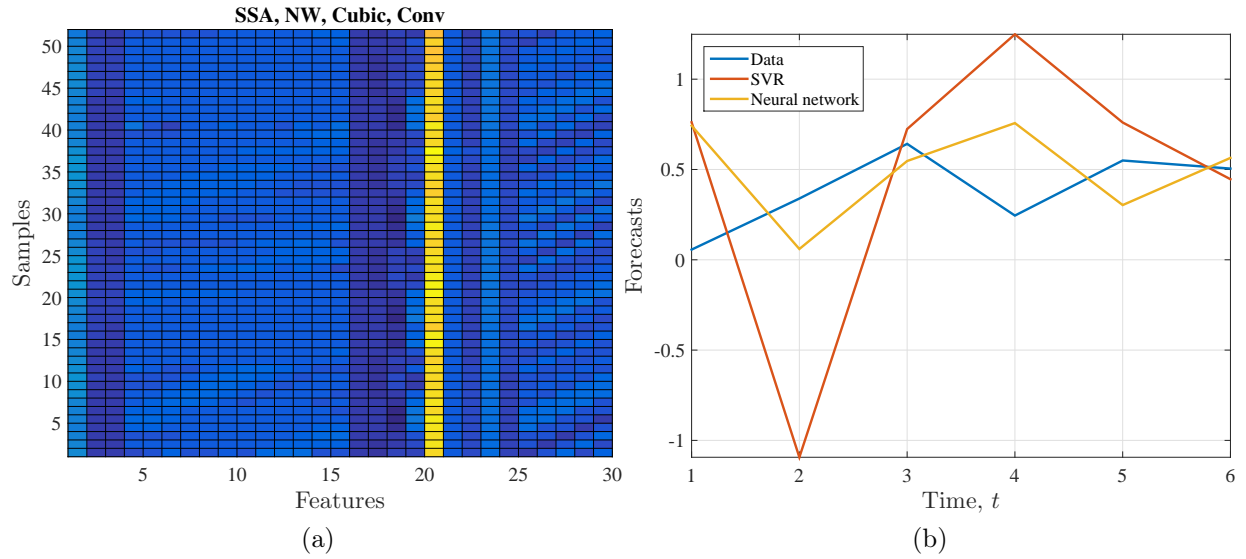
(a)　　　　　　　　　　　　　　　　　(b)
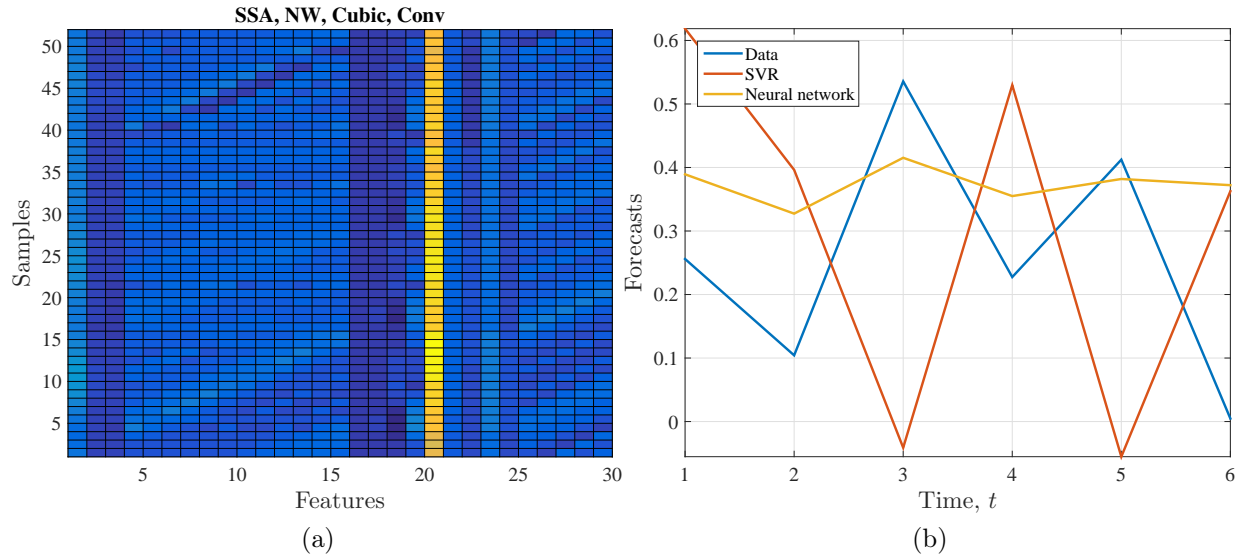
Рис. 10: (a) Feature generation results for NN3.005. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.005. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
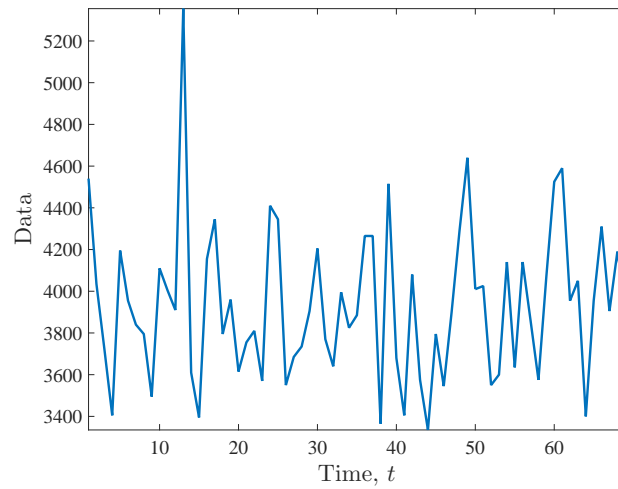
Рис. 11: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.006

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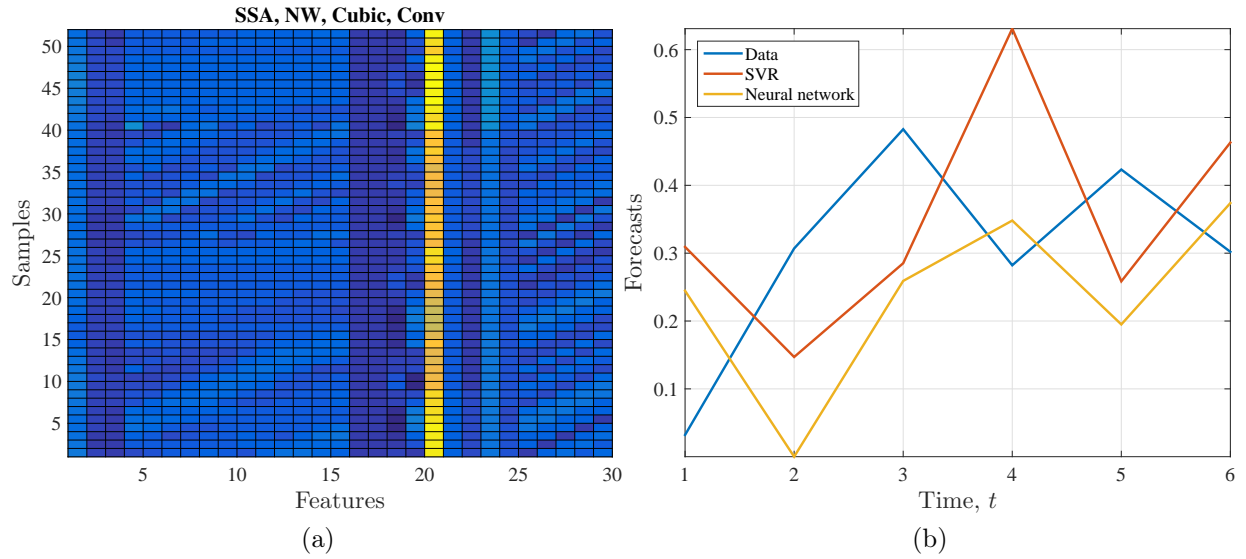
Рис. 12: (a) Feature generation results for NN3.006. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.006. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
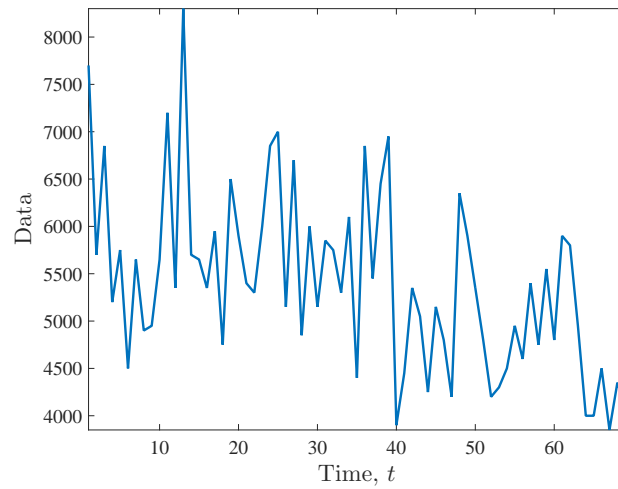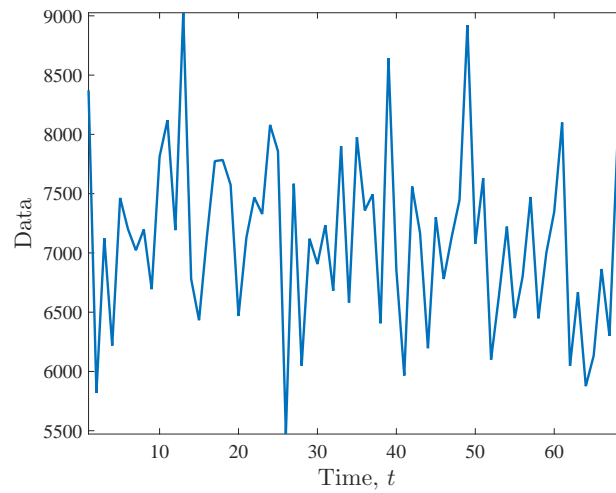

Рис. 13: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.007
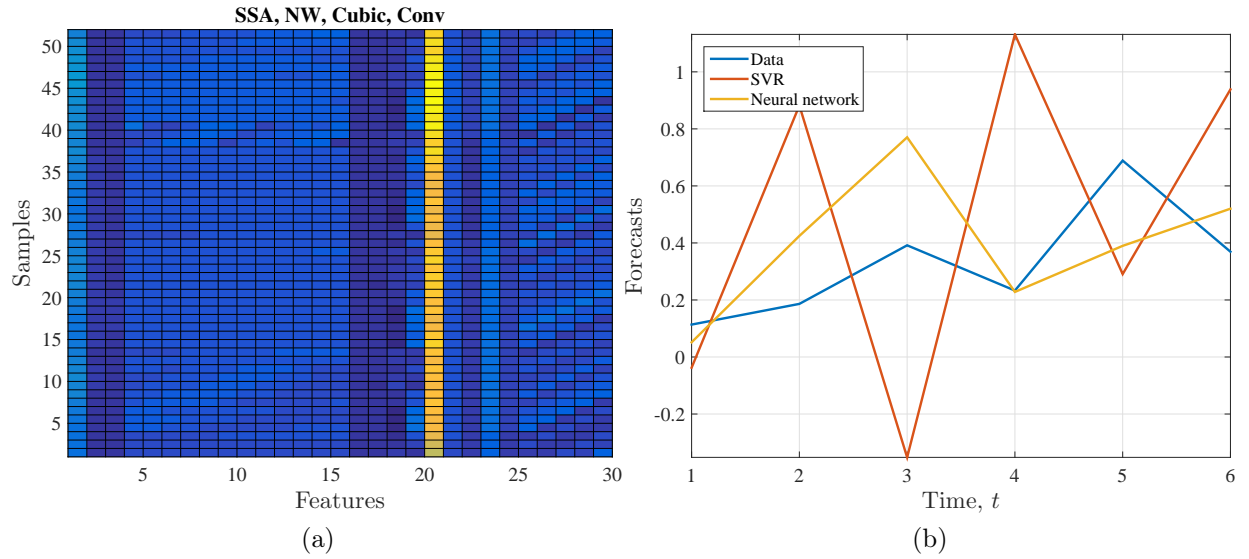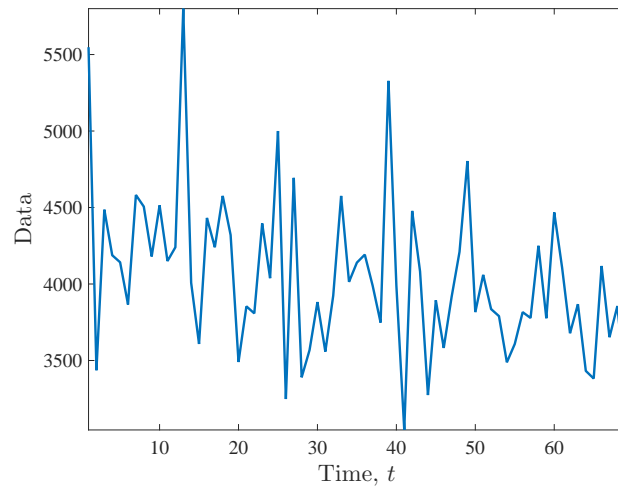
(a)   (b)
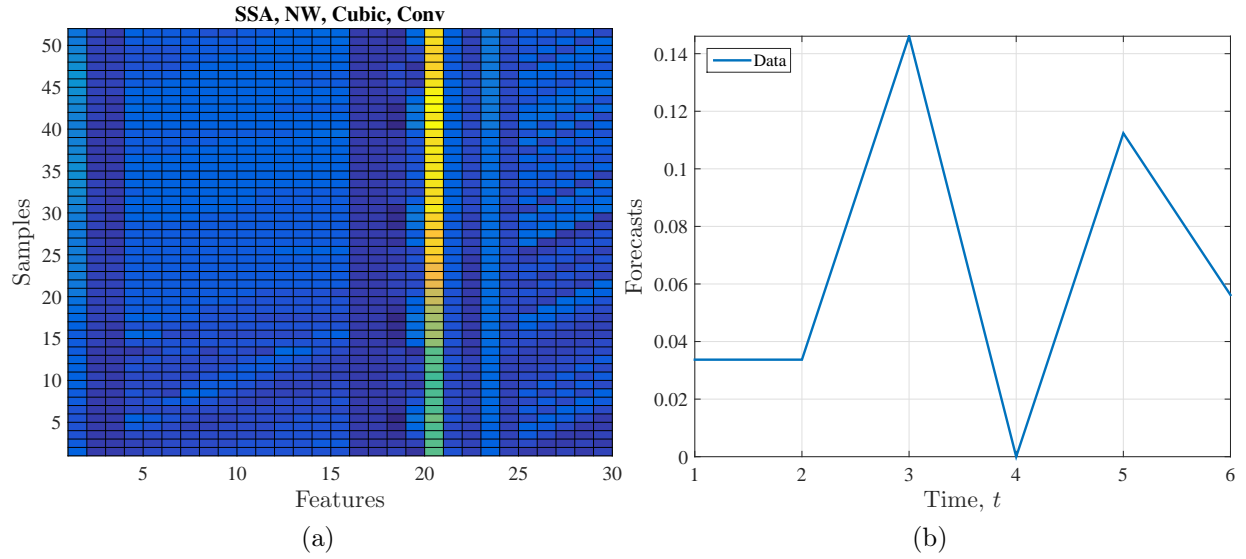
Рис. 14: (a) Feature generation results for NN3.007. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.007. Error exceeds 1000 for the following models: VAR, SVR, Neural network.The forecasts for VAR, SVR, Neural network are not displayed.
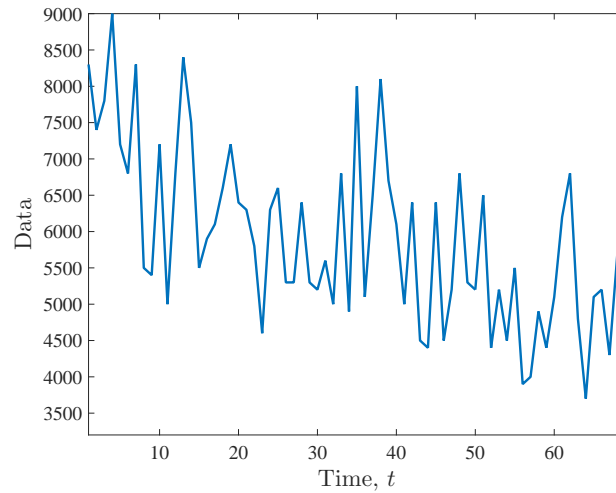
Рис. 15: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.008
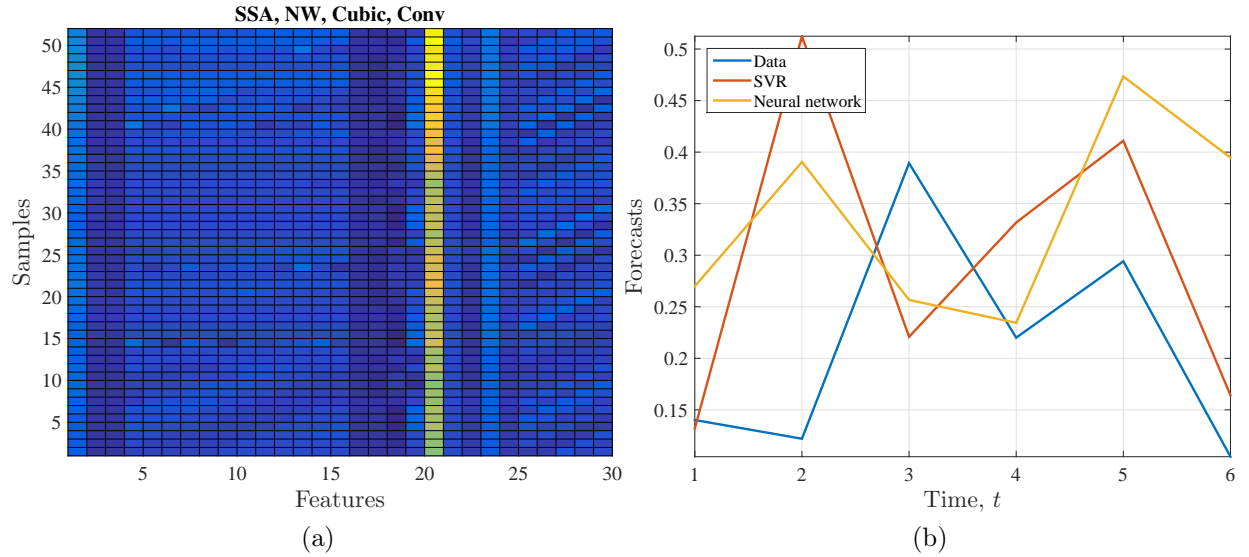
16
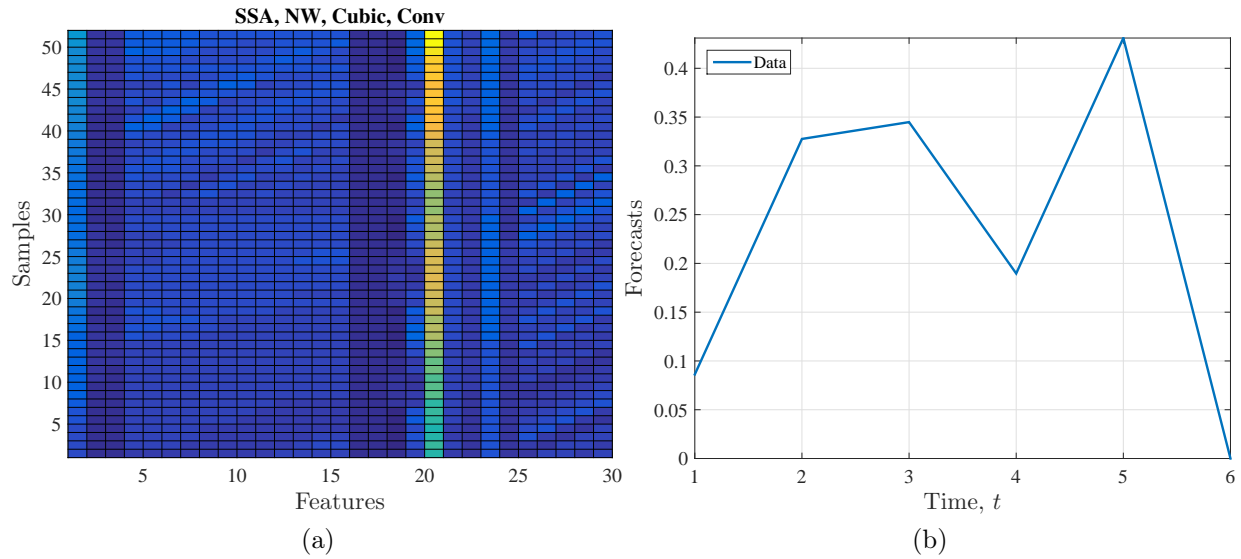
Рис. 16: (a) Feature generation results for NN3.008. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.008. Error exceeds 1000 for the following models: VAR, SVR, Neural network.The forecasts for VAR, SVR, Neural network are not displayed.
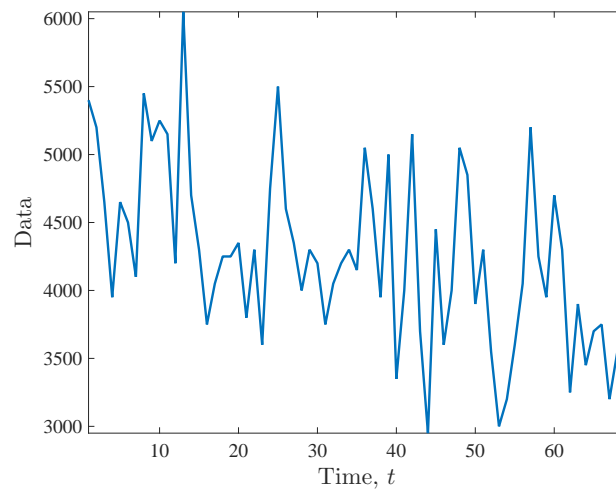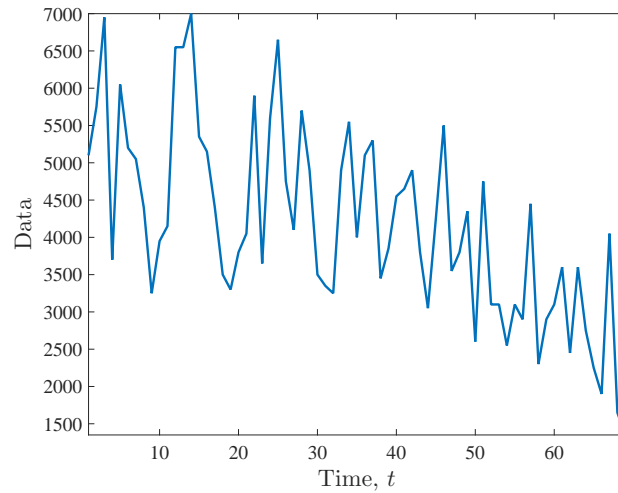

Рис. 17: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.009
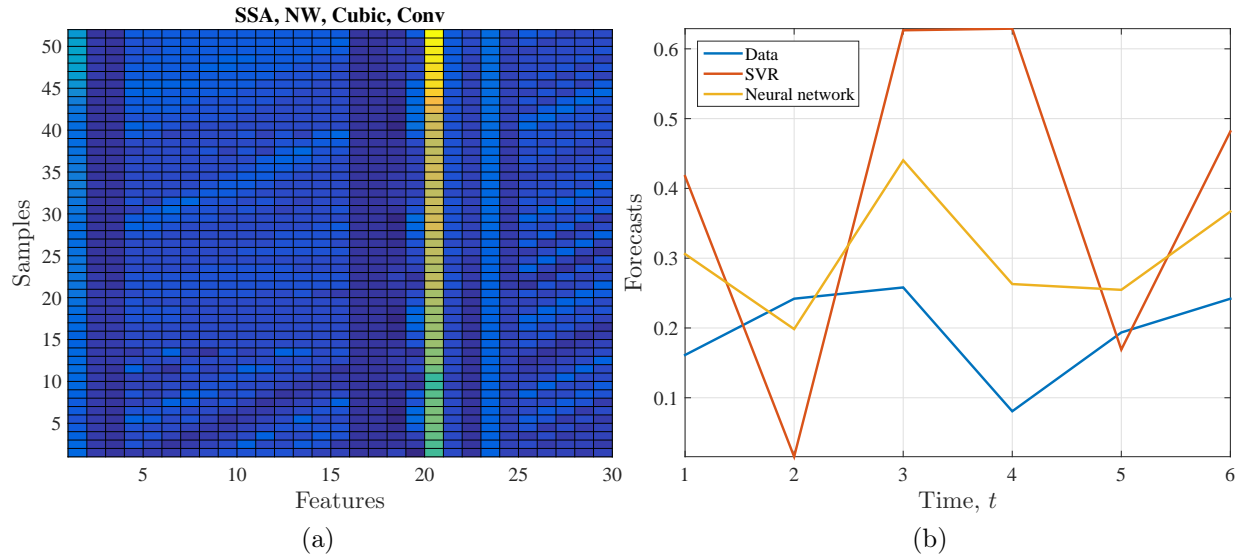
Рис. 18: (a) Feature generation results for NN3.009. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.009. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
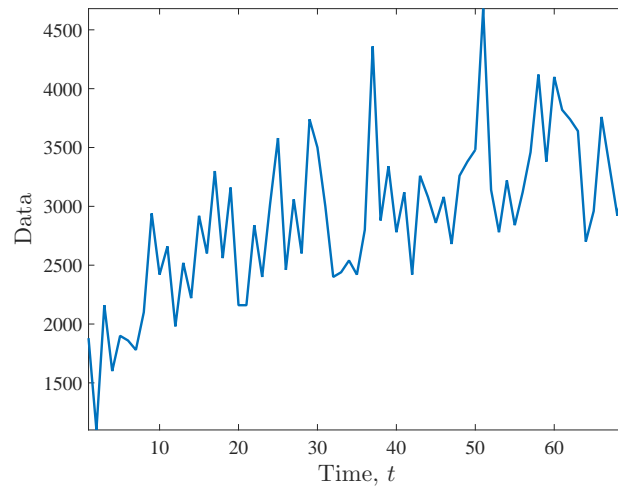
Рис. 19: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.010
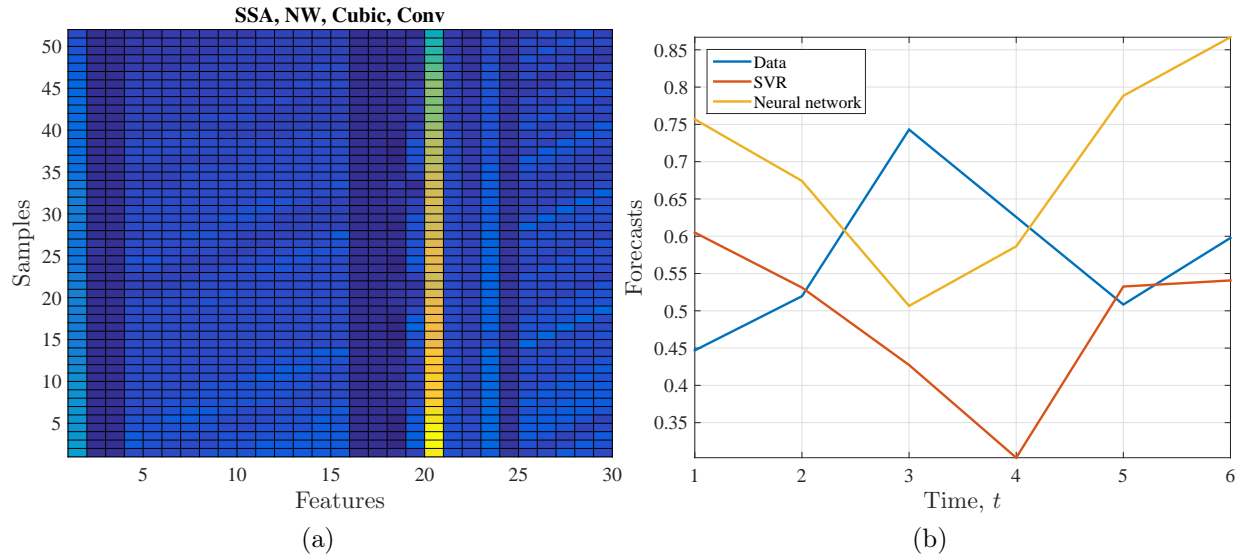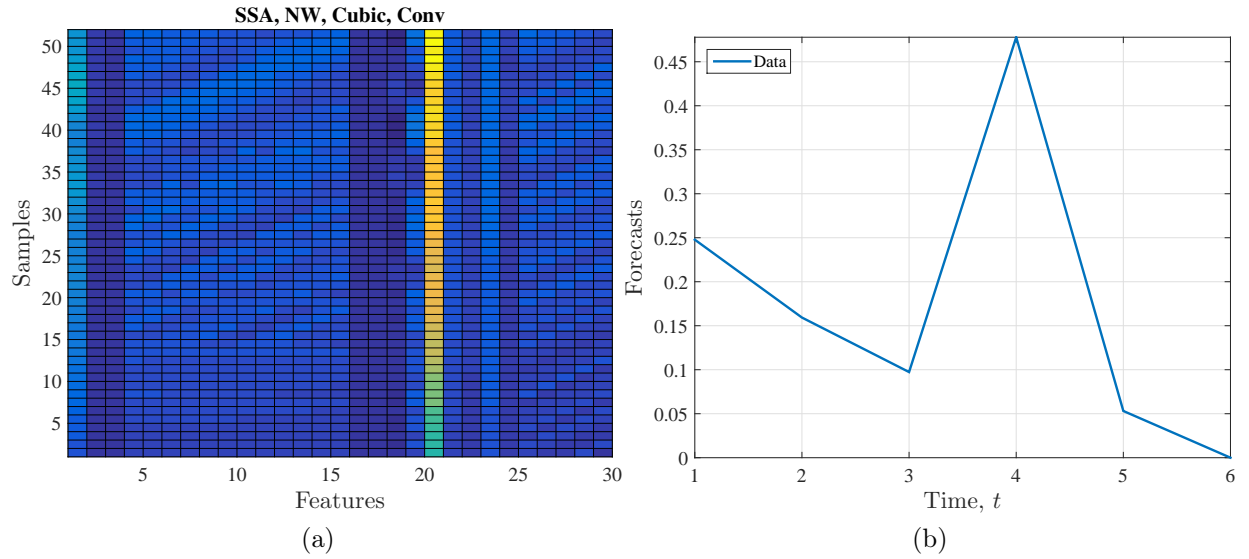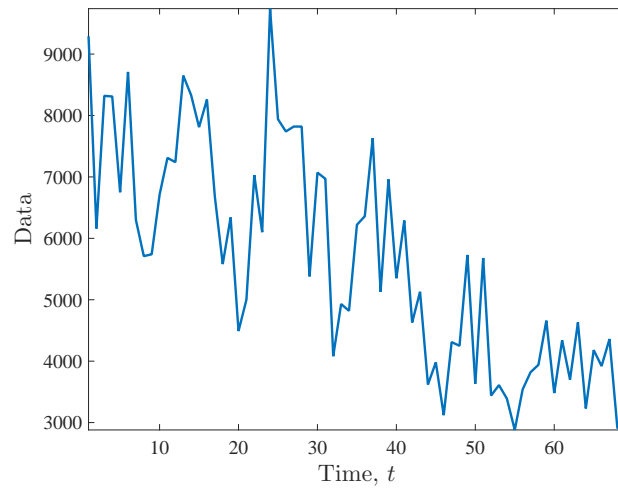
Рис. 20: (a) Feature generation results for NN3.010. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.010. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
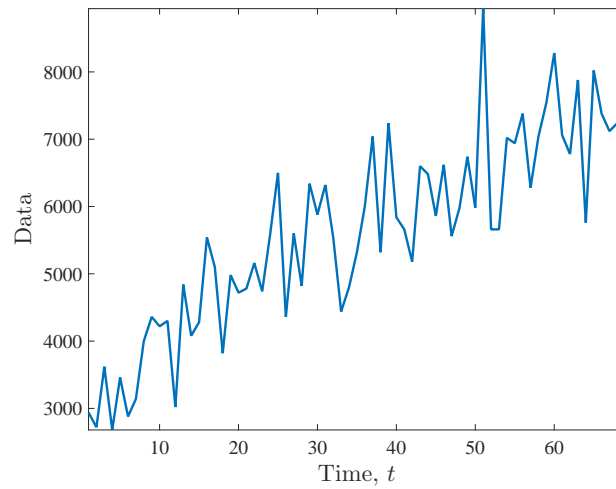
Рис. 21: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.011
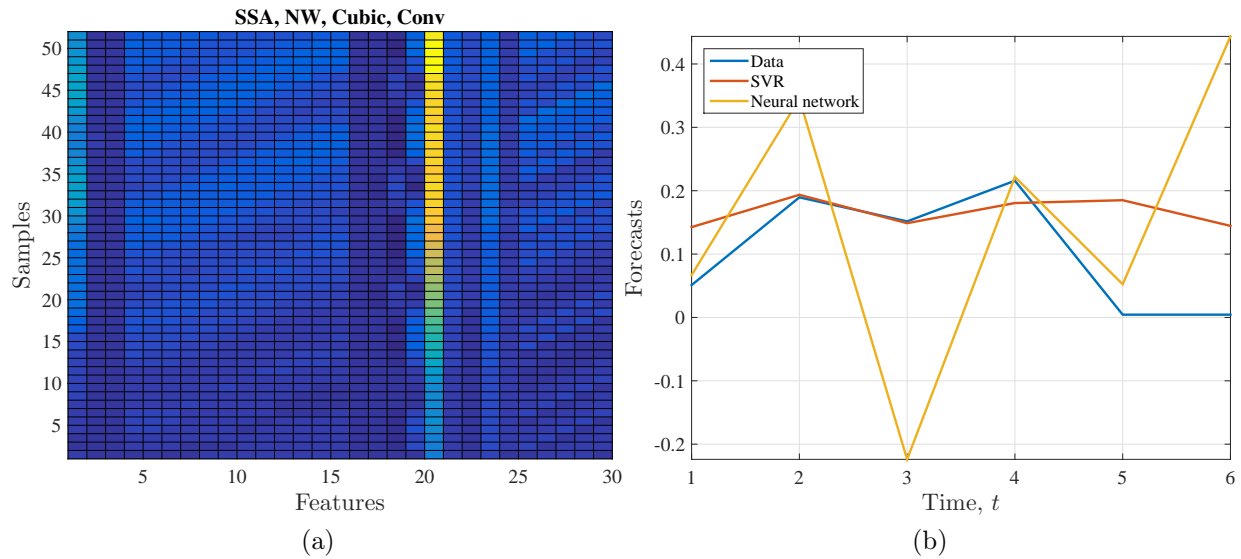
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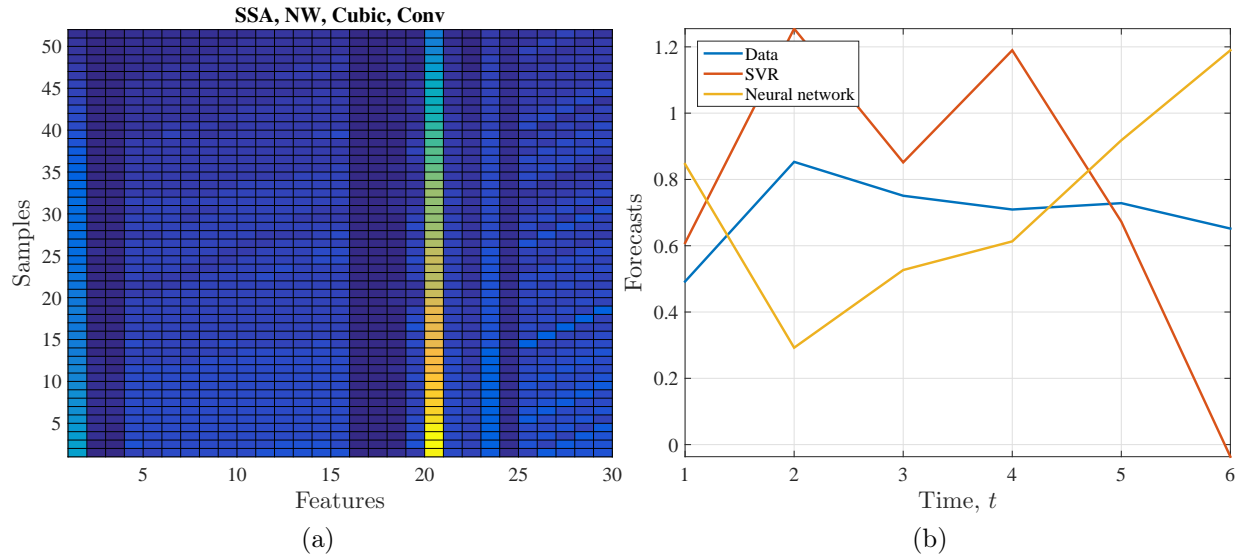
Рис. 22: (a) Feature generation results for NN3.011. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.011. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
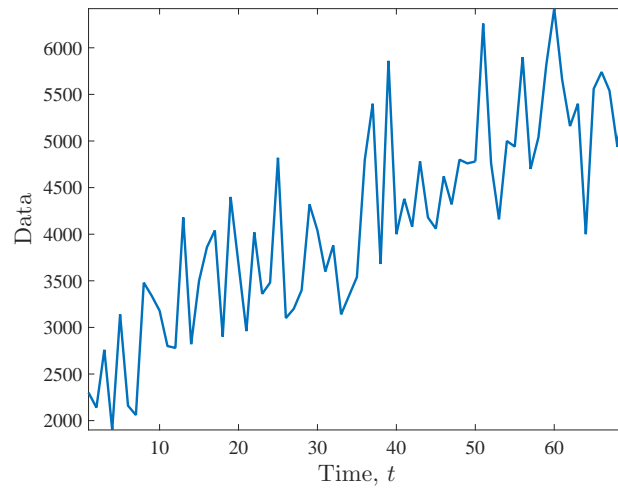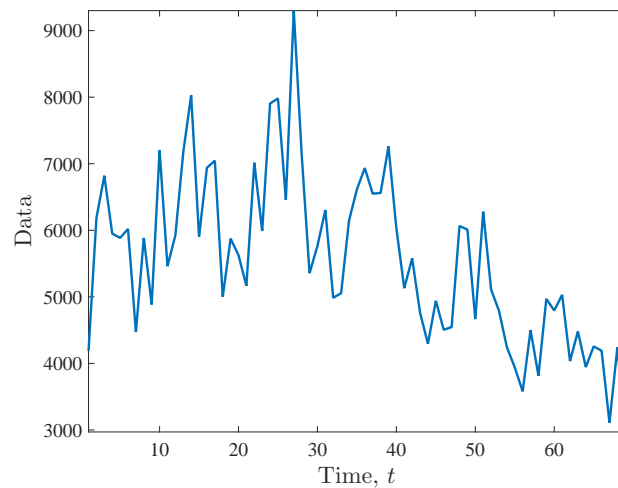

Рис. 23: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.012
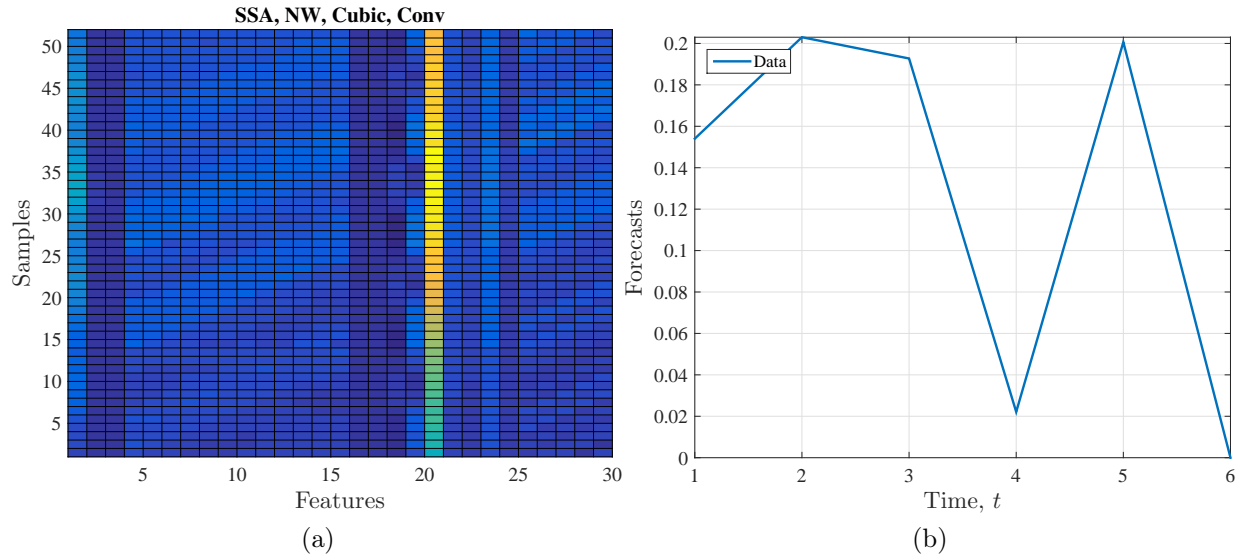
(a)

(b)

Рис. 24: (a) Feature generation results for NN3.012. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.012. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
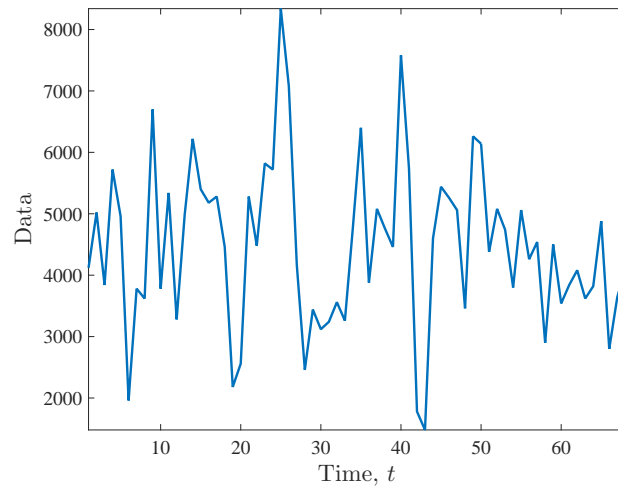

Рис. 25: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.013

(a)   (b)

Рис. 26: (a) Feature generation results for NN3.013. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.013. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.

Рис. 27: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.014
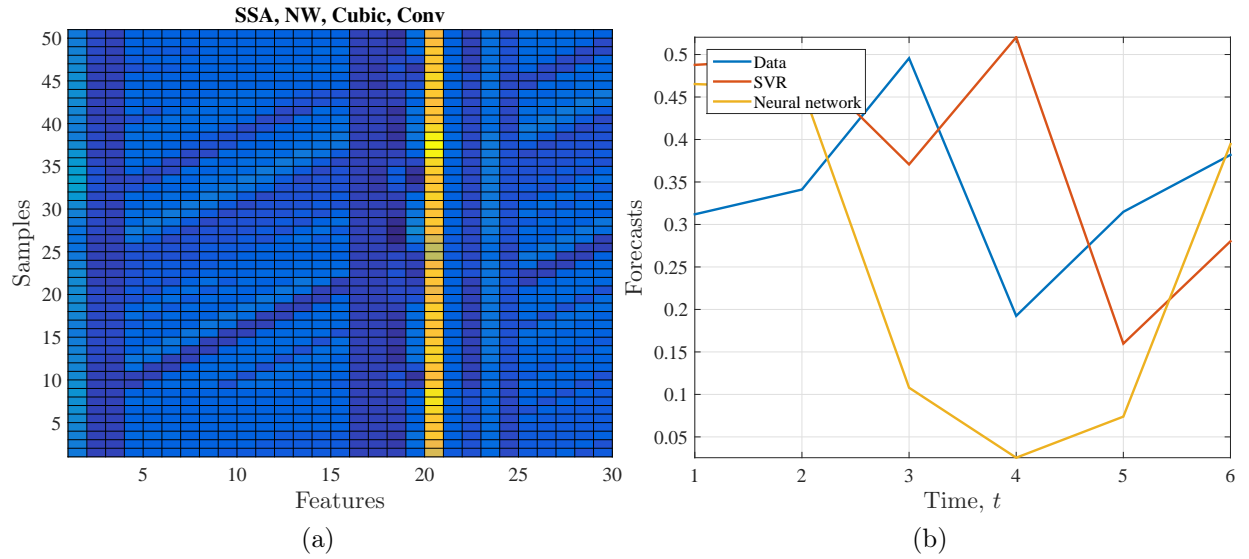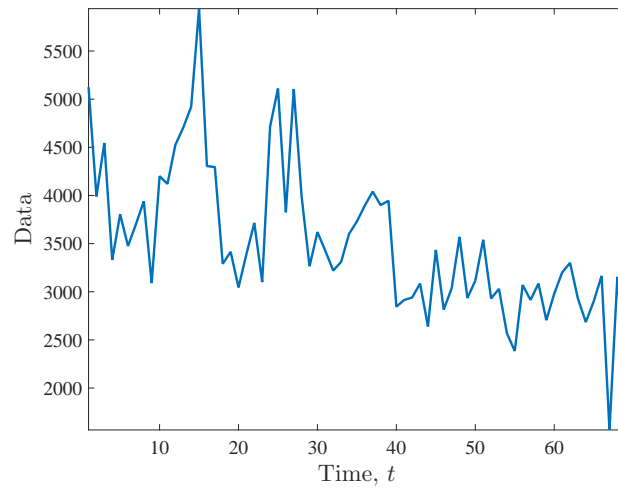
(a)   (b)

Рис. 28: (a) Feature generation results for NN3.014. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.014. Error exceeds 1000 for the following models: VAR, SVR, Neural network.The forecasts for VAR, SVR, Neural network are not displayed.

Рис. 29: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.015
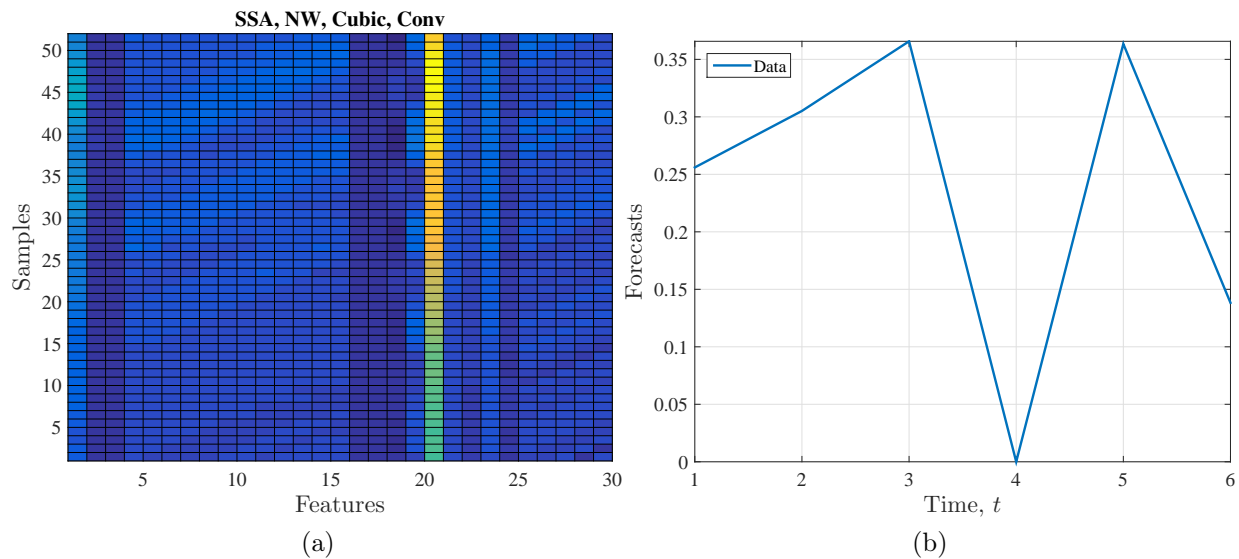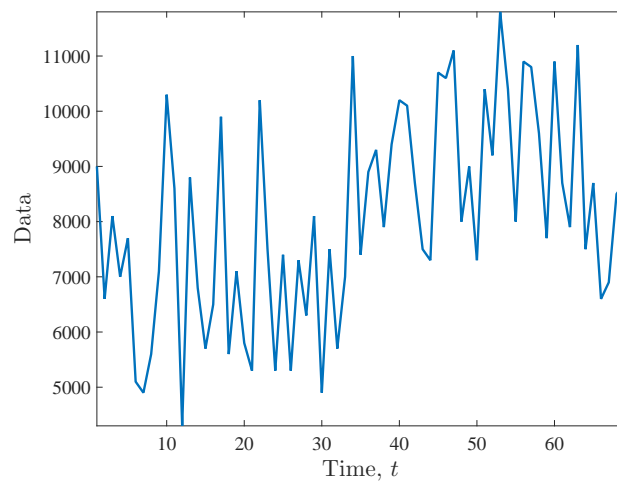
Рис. 30: (a) Feature generation results for NN3.015. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.015. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.

Рис. 31: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.016

Рис. 32: (a) Feature generation results for NN3.016. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.016. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.

Рис. 33: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.017
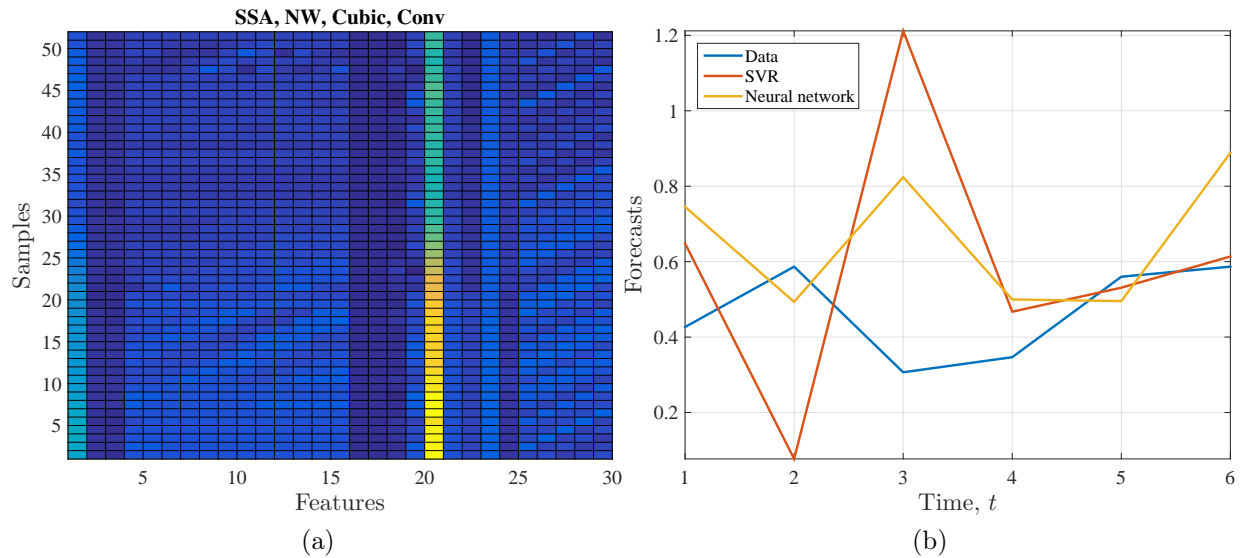
Рис. 34: (a) Feature generation results for NN3.017. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.017. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
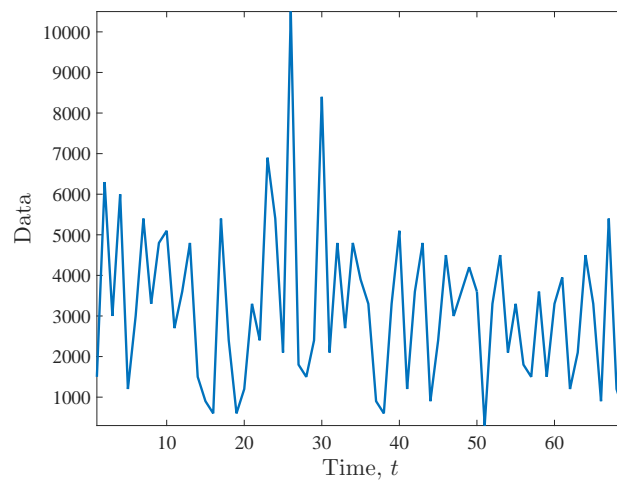

Рис. 35: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.018
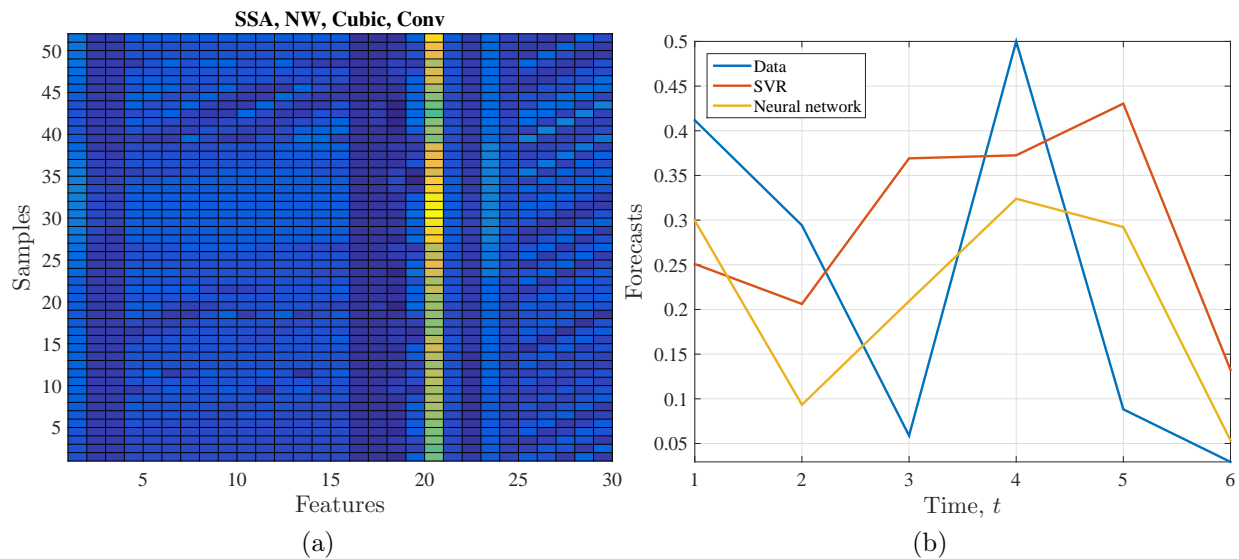
26

(a)   (b)

Рис. 36: (a) Feature generation results for NN3.018. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.018. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
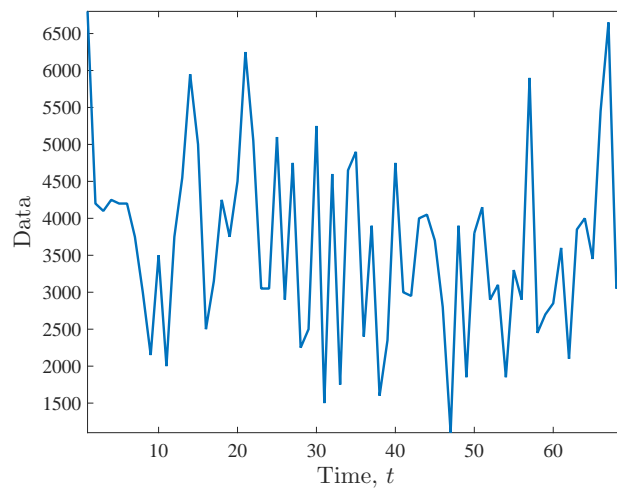

Рис. 37: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.019
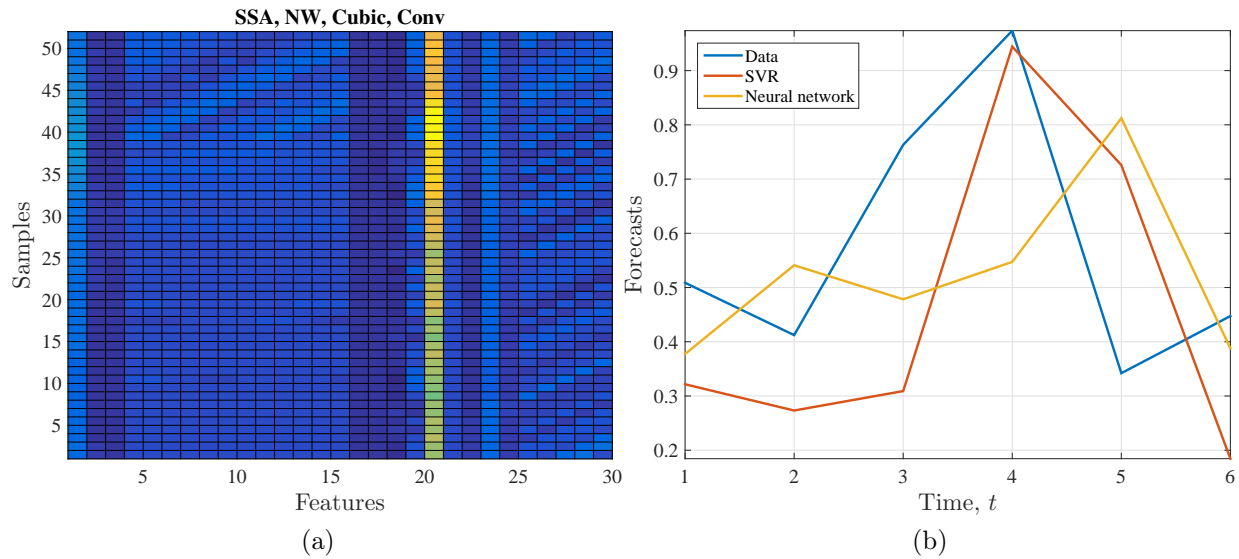
27

(a) (b)

Рис. 38: (a) Feature generation results for NN3.019. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.019. Error exceeds 1000 for the following models: VAR, SVR, Neural network.The forecasts for VAR, SVR, Neural network are not displayed.

Рис. 39: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.020

Рис. 40: (a) Feature generation results for NN3.020. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.020. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
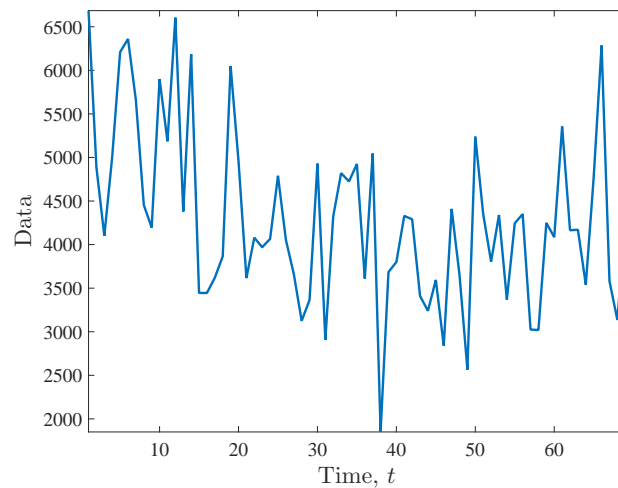

Рис. 41: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.021
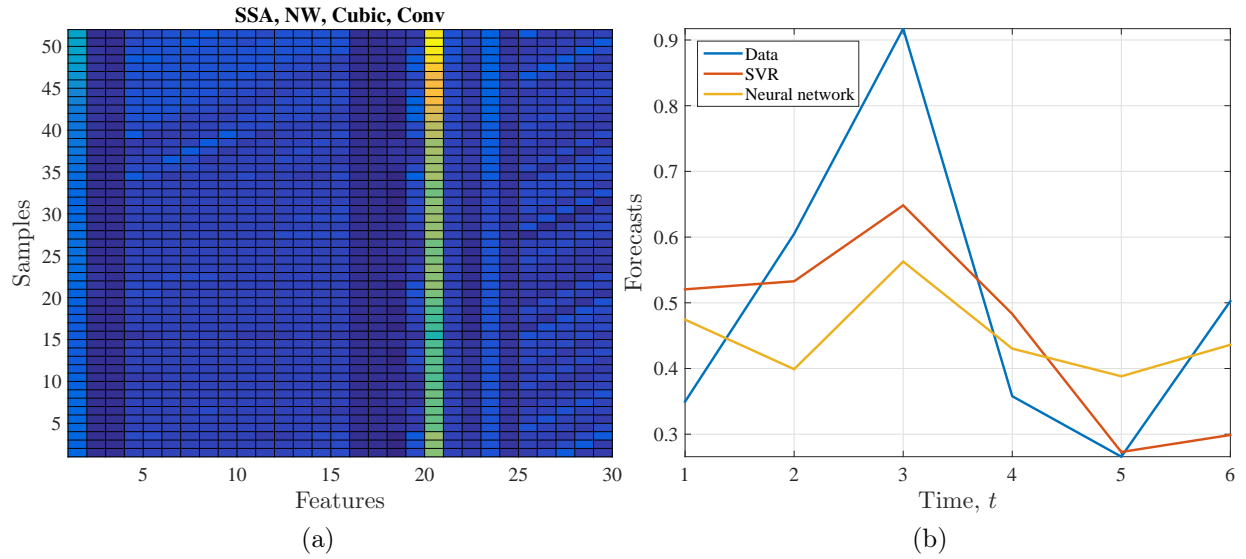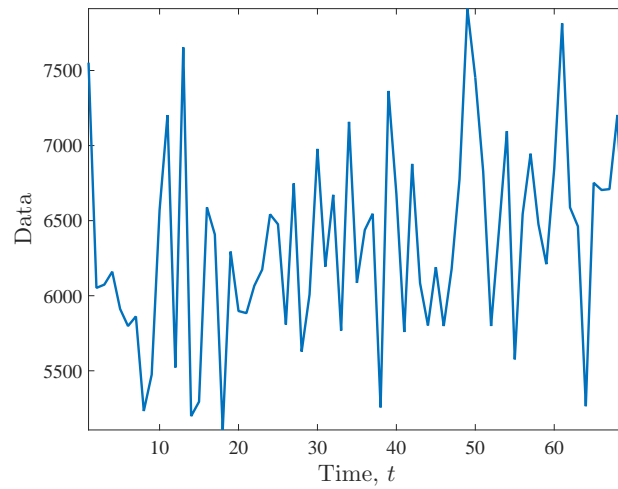
(a) (b)

Рис. 42: (a) Feature generation results for NN3.021. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.021. Error exceeds 1000 for the following models: VAR, SVR, Neural network.The forecasts for VAR, SVR, Neural network are not displayed.

Рис. 43: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.022
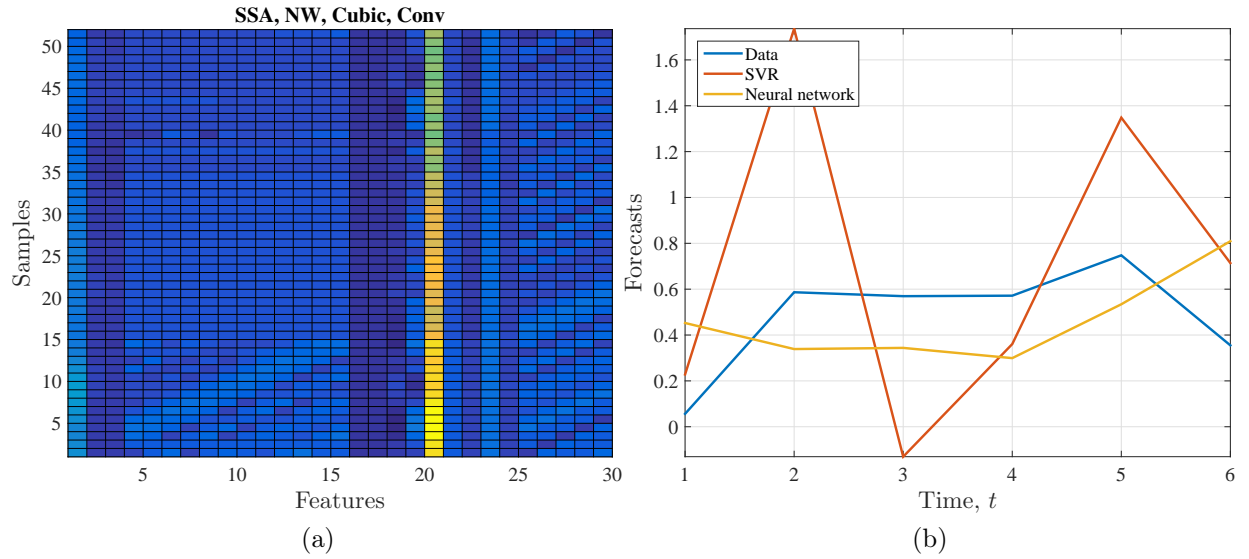
(a)   (b)

Рис. 44: (a) Feature generation results for NN3.022. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.022. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
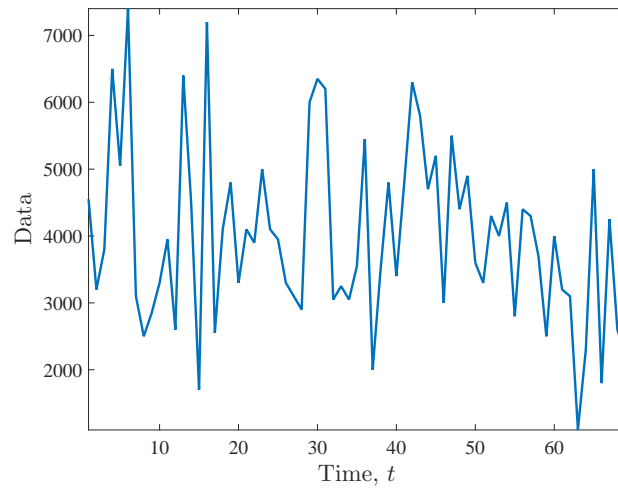

Рис. 45: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.023

Рис. 46: (a) Feature generation results for NN3.023. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.023. Error exceeds 1000 for the following models: VAR, SVR, Neural network.The forecasts for VAR, SVR, Neural network are not displayed.

Рис. 47: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.024
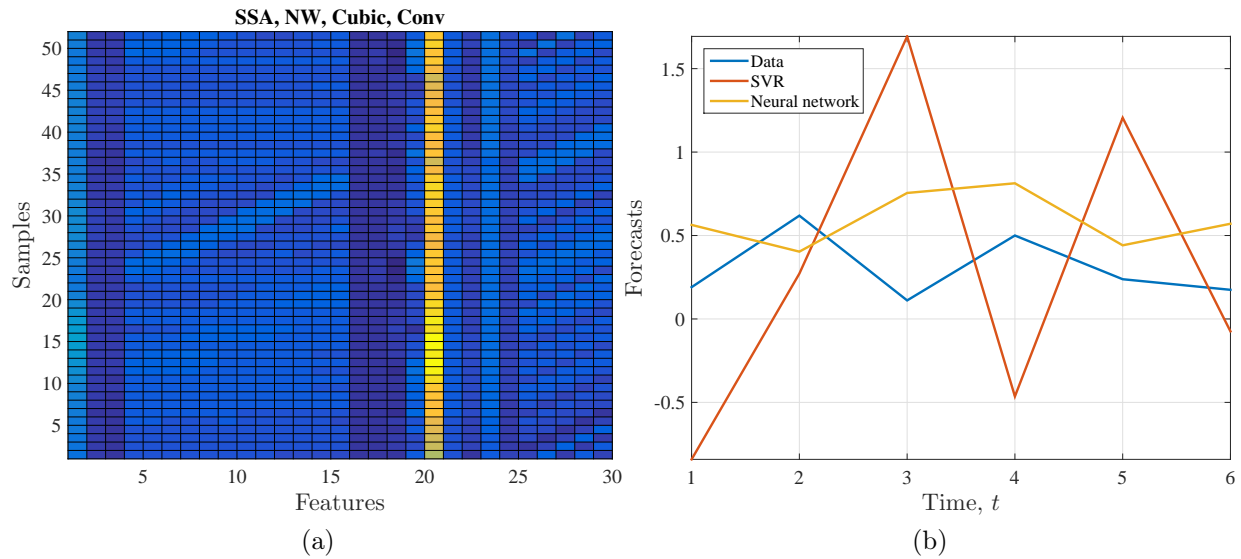
Рис. 48: (a) Feature generation results for NN3.024. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.024. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
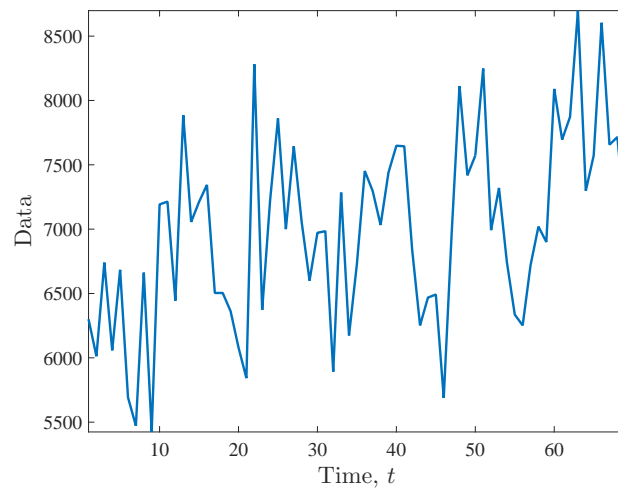

Рис. 49: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.025
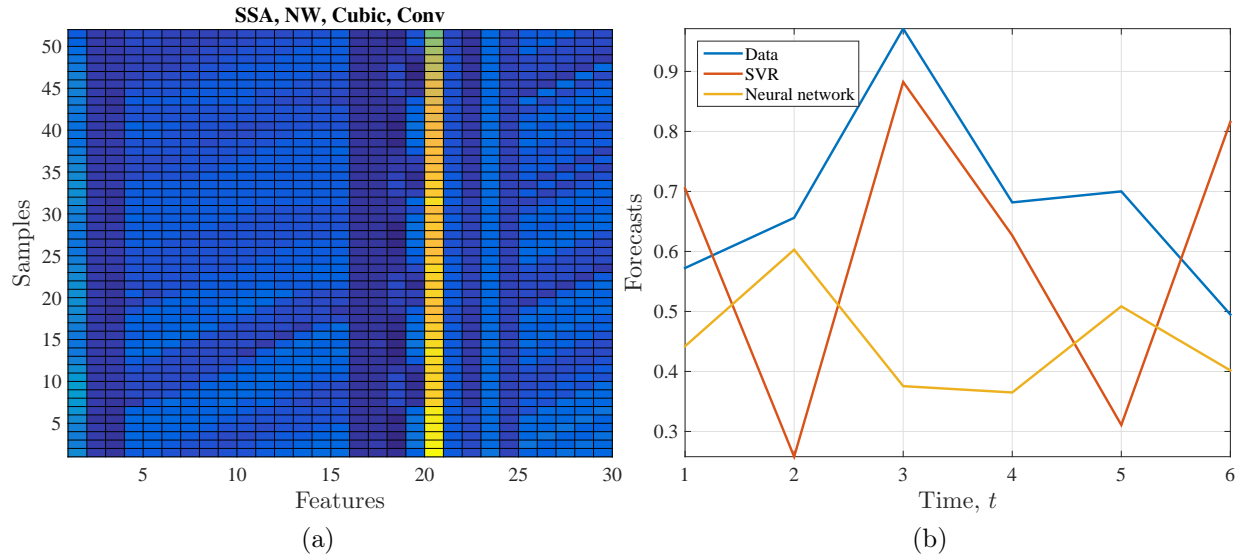
(a)   (b)

Рис. 50: (a) Feature generation results for NN3.025. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.025. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
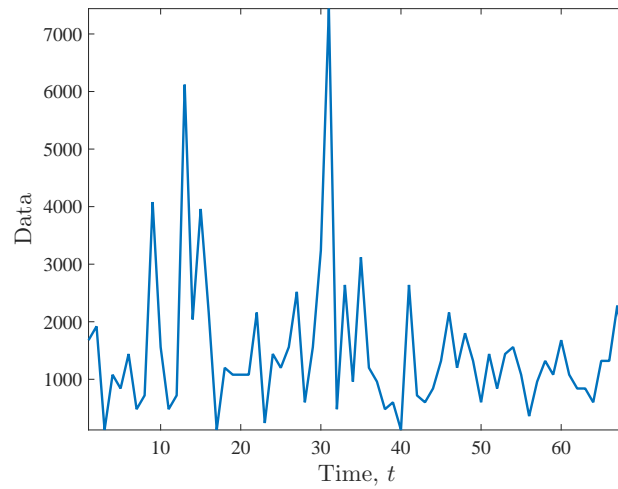

Рис. 51: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.026
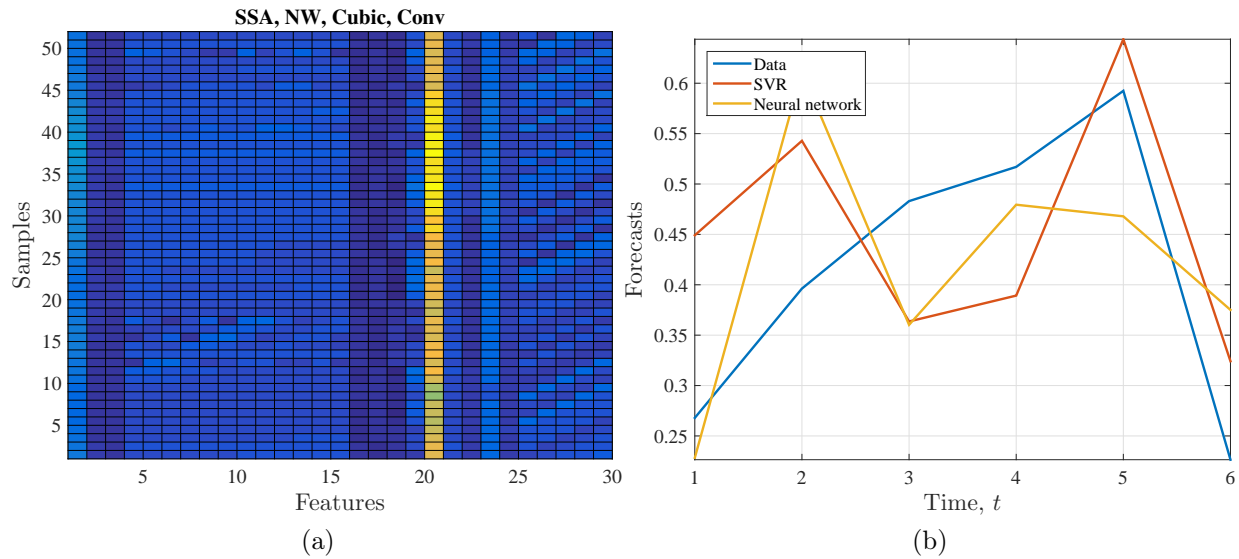
(a)   (b)

Рис. 52: (a) Feature generation results for NN3.026. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.026. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
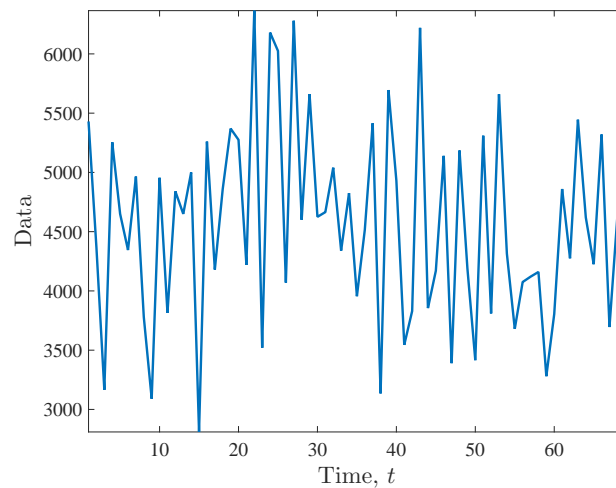

Рис. 53: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.027

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Рис. 54: (a) Feature generation results for NN3.027. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.027. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.

Рис. 55: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.028
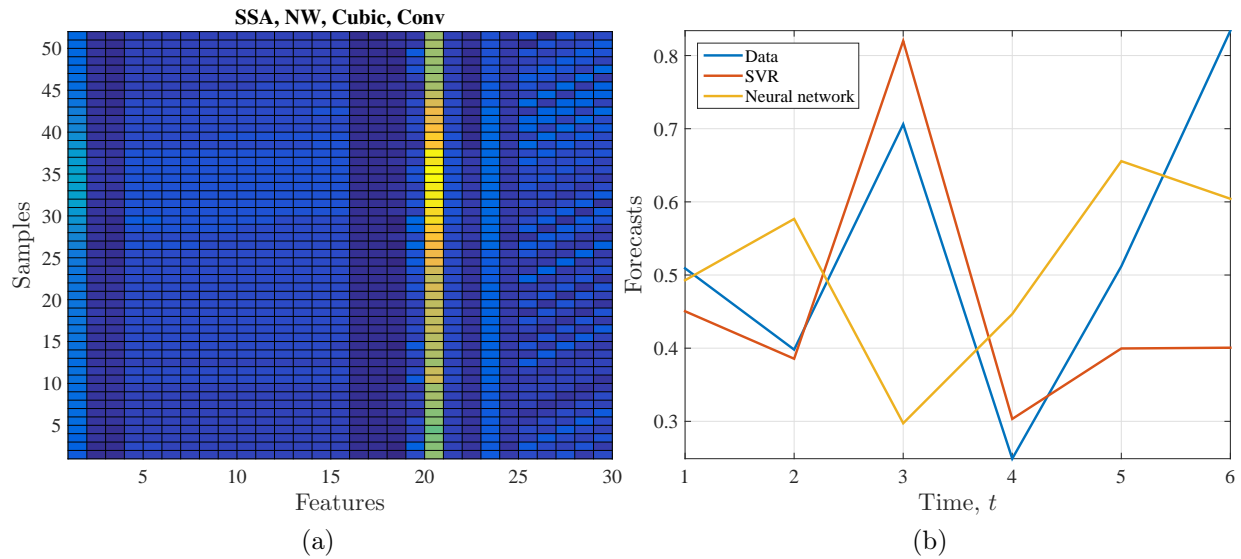
36

(a)

(b)

Рис. 56: (a) Feature generation results for NN3.028. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.028. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
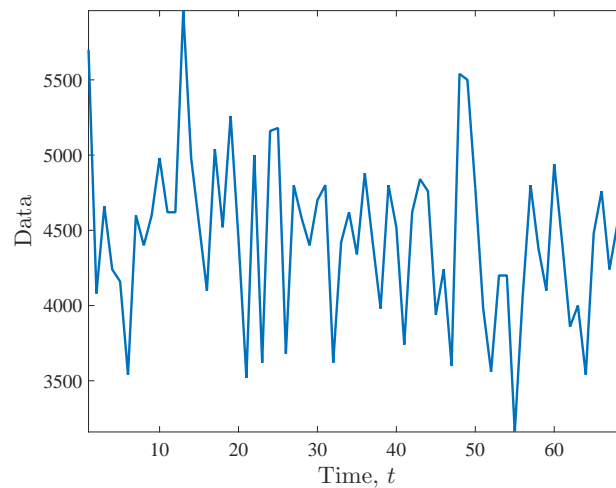

Рис. 57: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.029
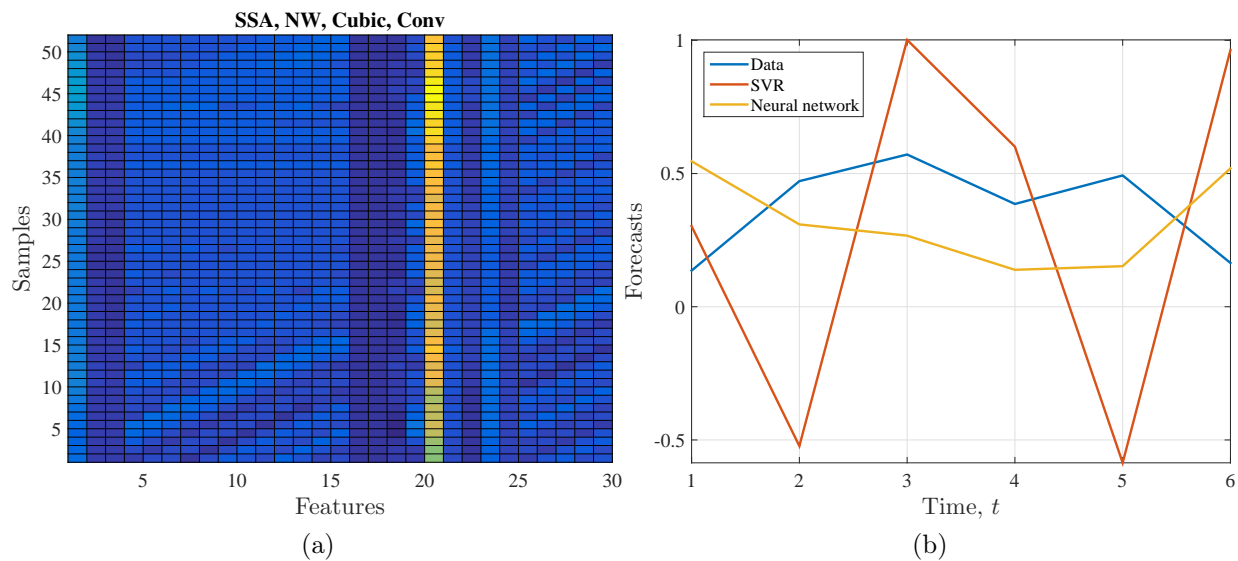
(a)   (b)

Рис. 58: (a) Feature generation results for NN3.029. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.029. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
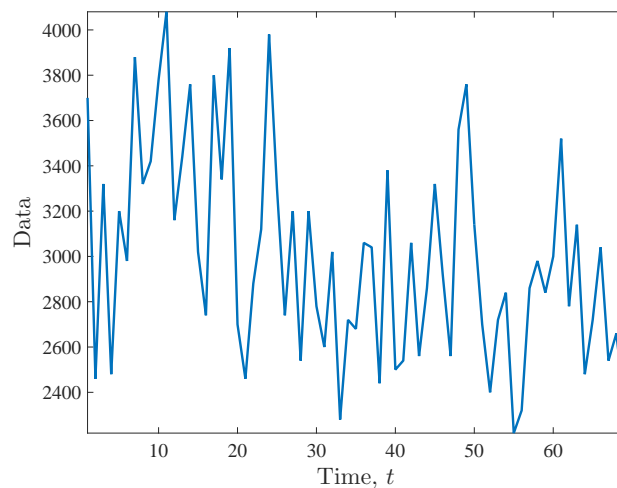

Рис. 59: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.030
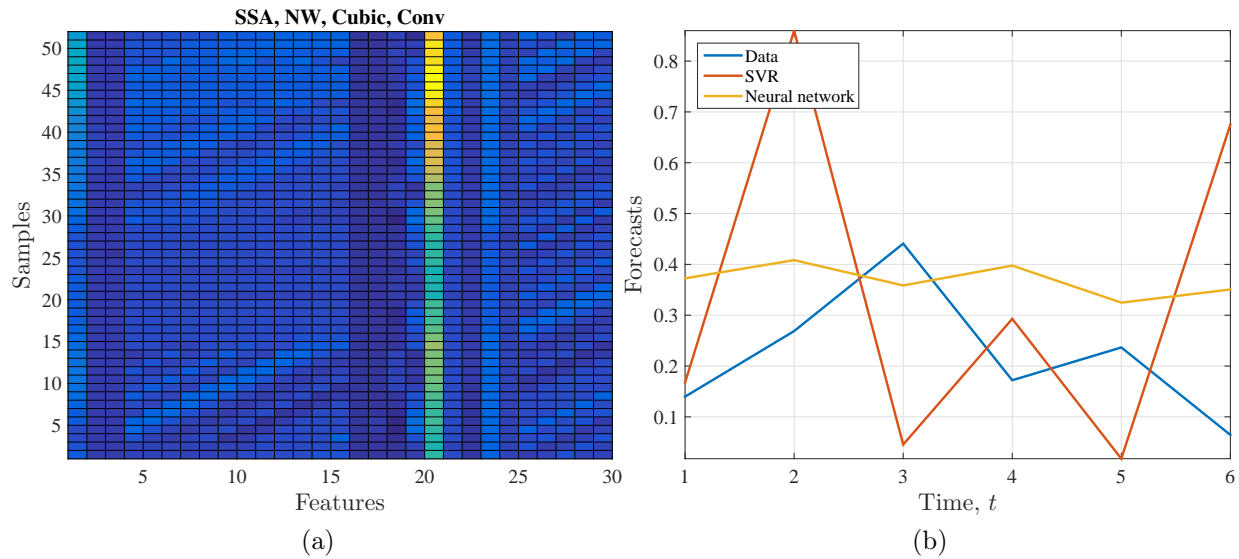
Рис. 60: (a) Feature generation results for NN3.030. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.030. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
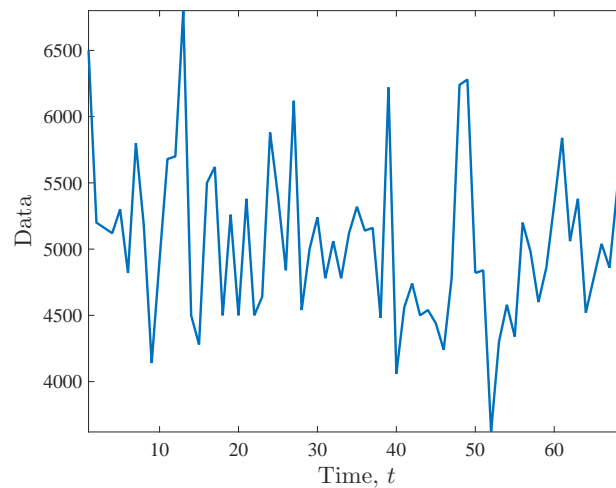

Рис. 61: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.031

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(a)   (b)

Рис. 62: (a) Feature generation results for NN3.031. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.031. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.

Рис. 63: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.032
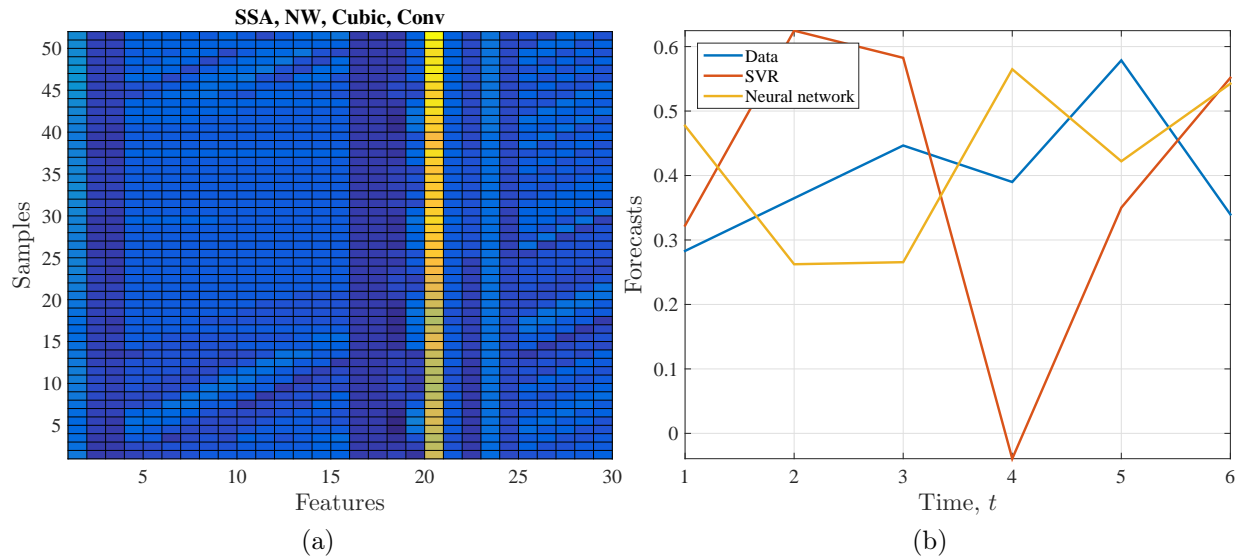
Рис. 64: (a) Feature generation results for NN3.032. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.032. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
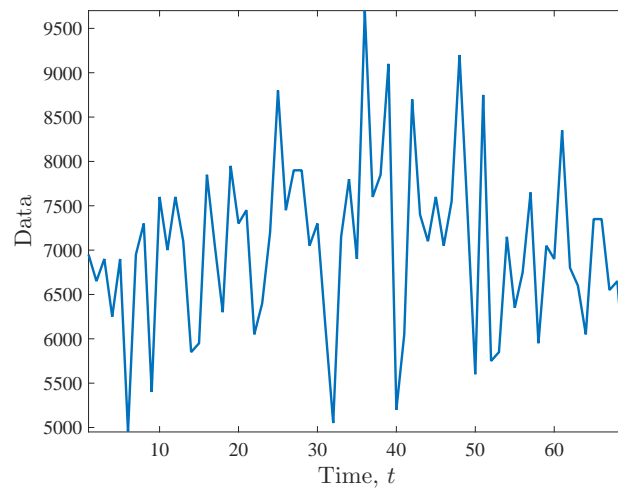

Рис. 65: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.033
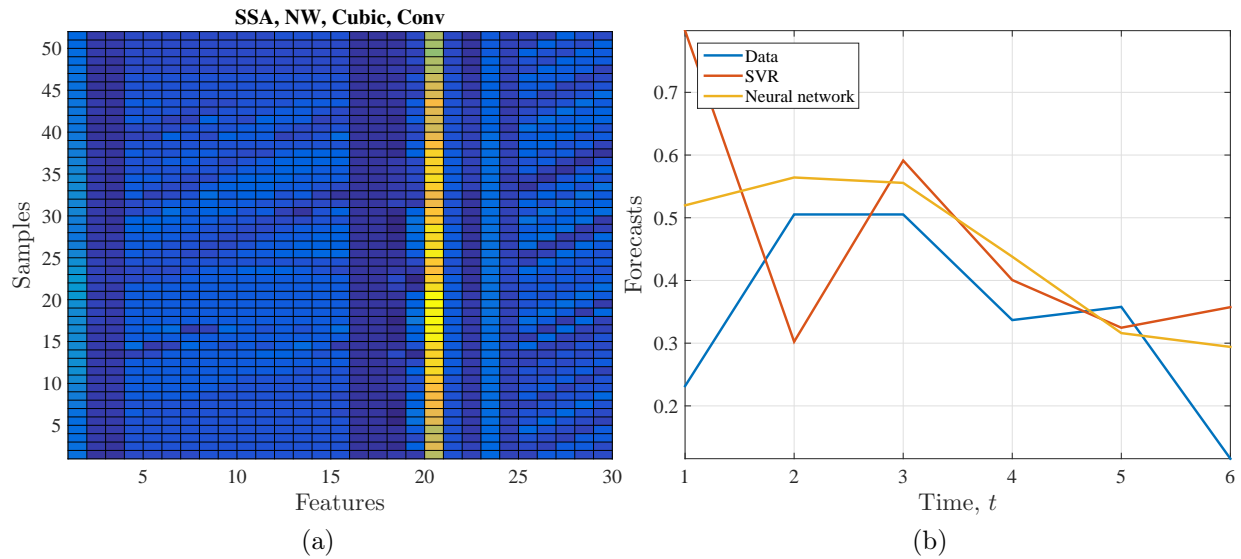
(a)   (b)

Рис. 66: (a) Feature generation results for NN3.033. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.033. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
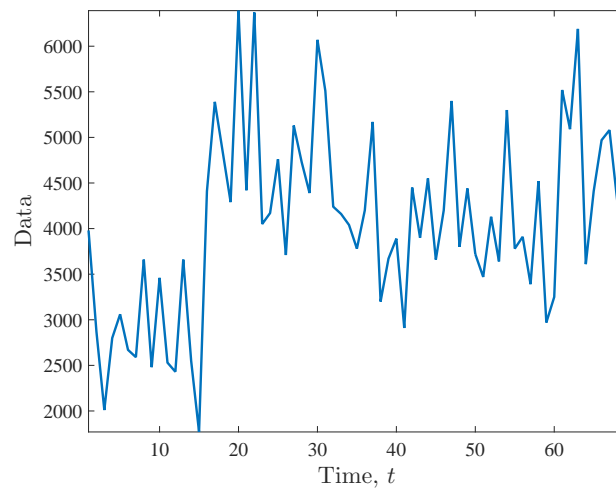

Рис. 67: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.034
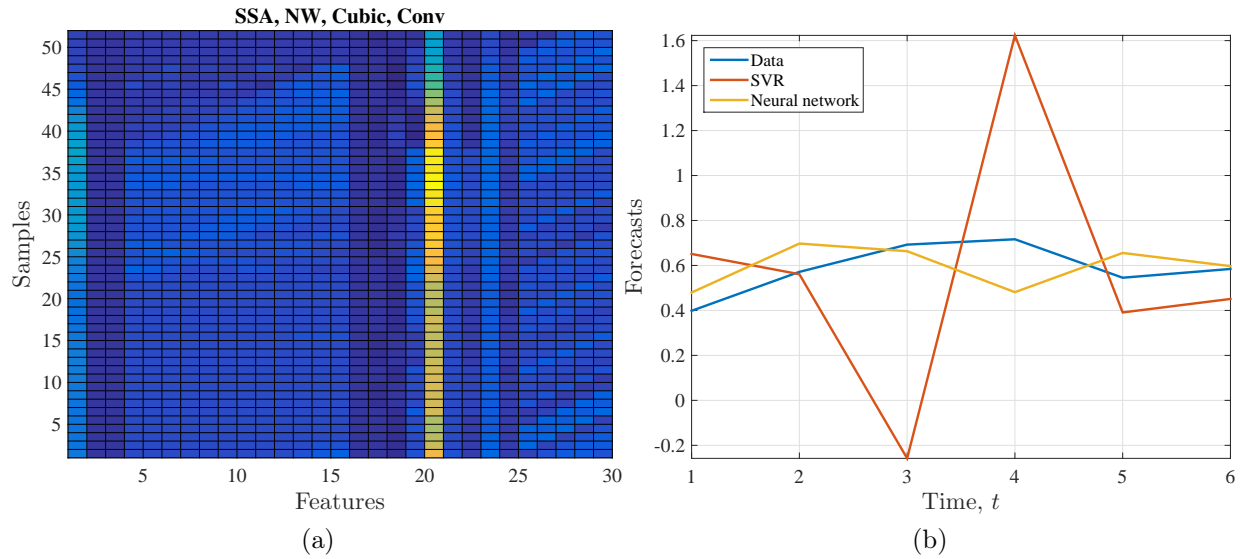
(a) (b)

Рис. 68: (a) Feature generation results for NN3.034. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.034. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.

Рис. 69: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.035

Рис. 70: (a) Feature generation results for NN3.035. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.035. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
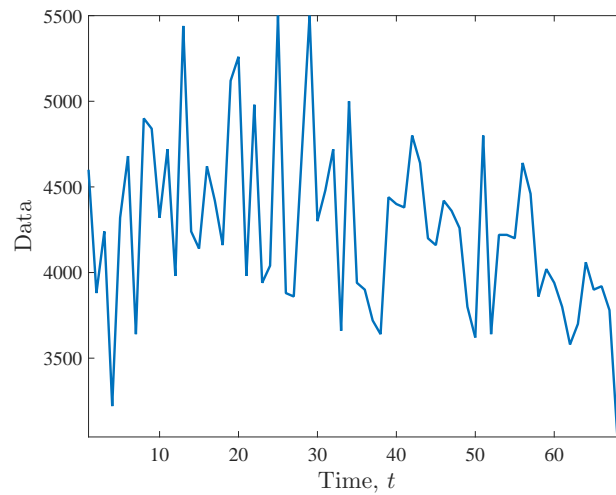

Рис. 71: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.036
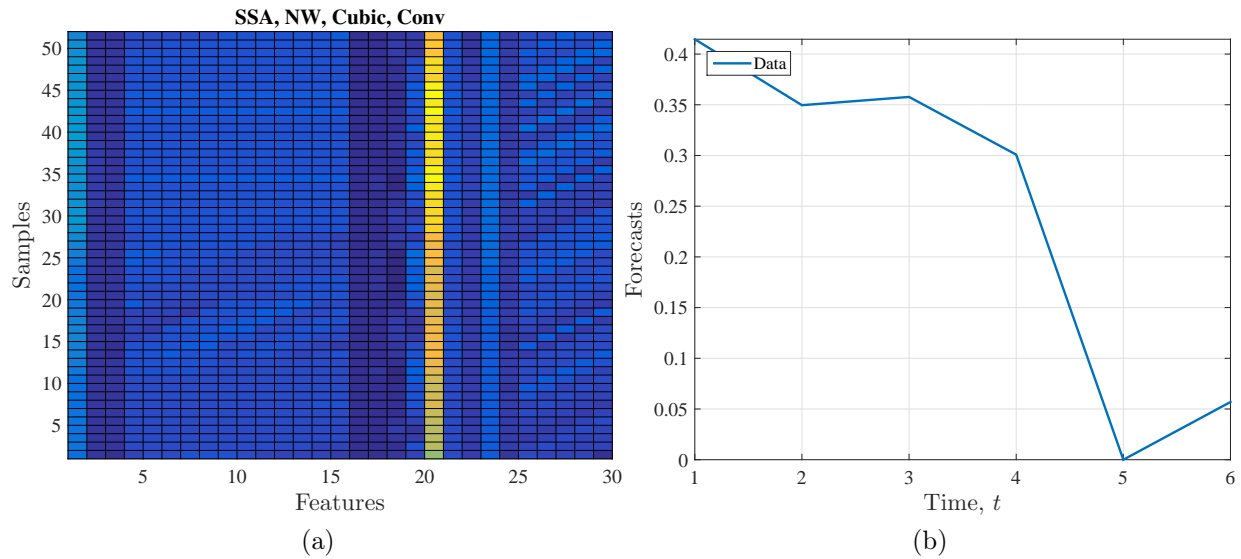
44

SSA, NW, Cubic, Conv

Рис. 72: (a) Feature generation results for NN3.036. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.036. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
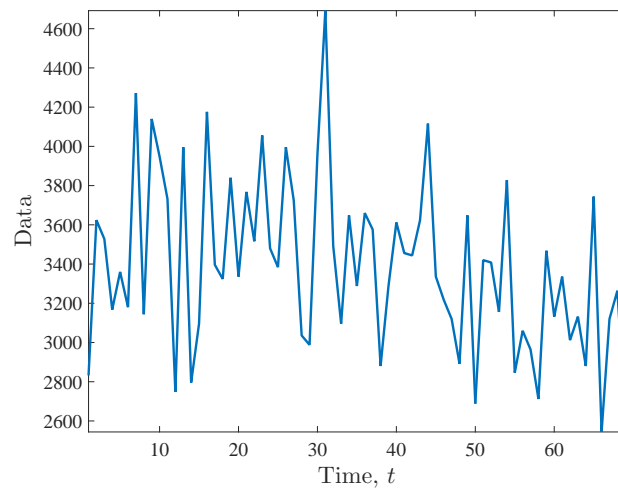

Рис. 73: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.037
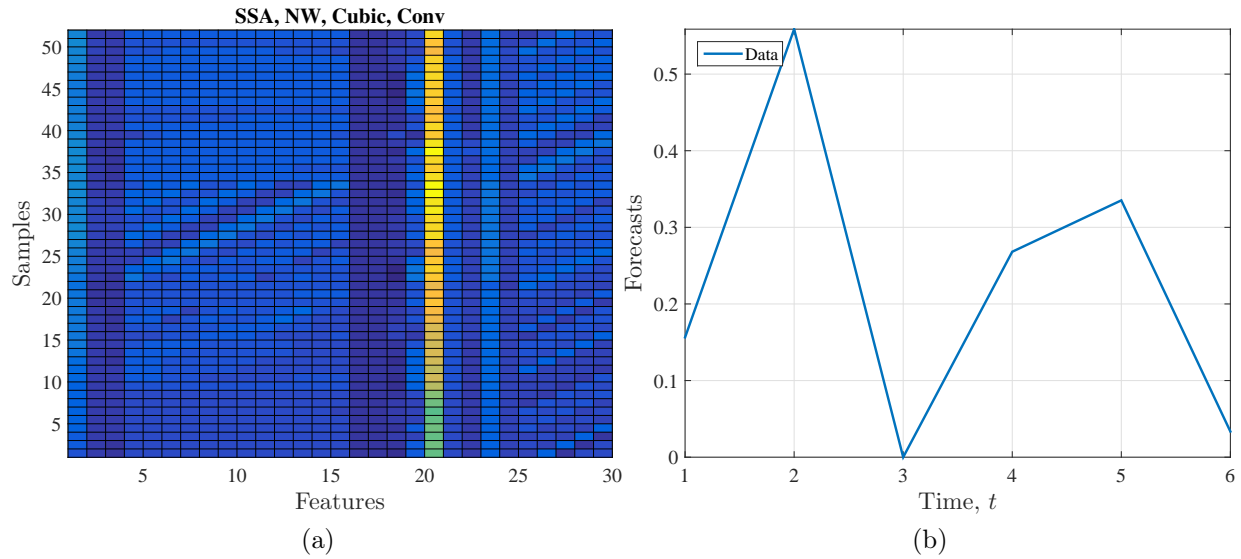
45

(a)   (b)

Рис. 74: (a) Feature generation results for NN3.037. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.037. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
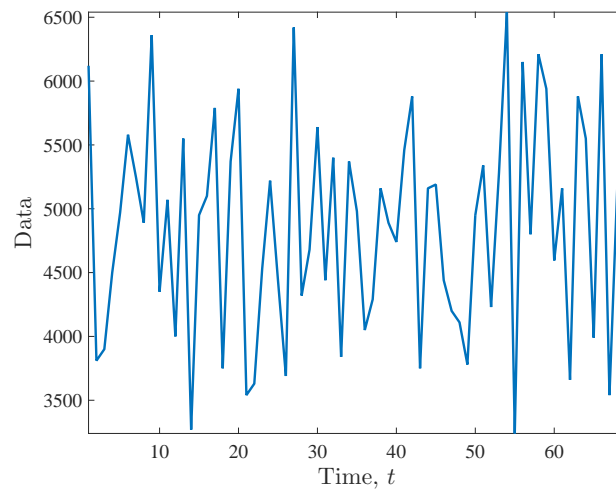

Рис. 75: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.038

Рис. 76: (a) Feature generation results for NN3.038. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.038. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.

Рис. 77: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.039
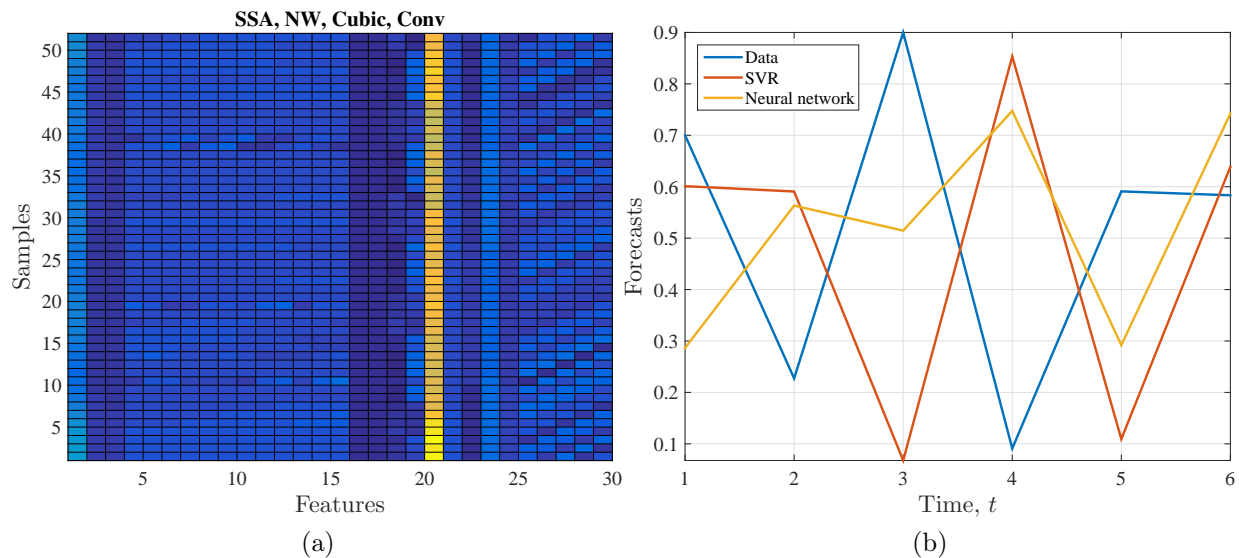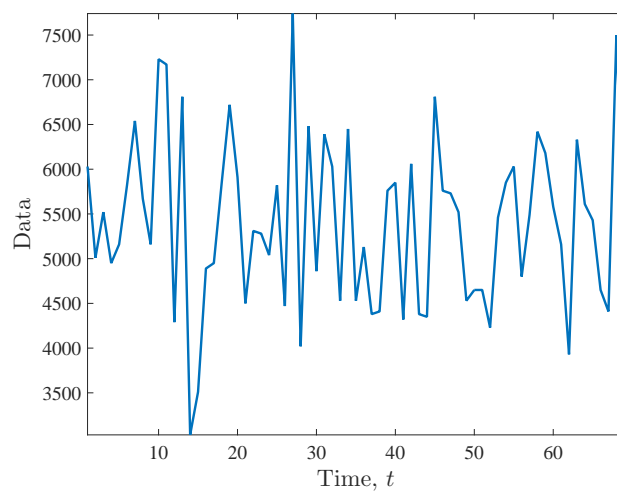
(a)   (b)

Рис. 78: (a) Feature generation results for NN3.039. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.039. Error exceeds 1000 for the following models: VAR, SVR, Neural network.The forecasts for VAR, SVR, Neural network are not displayed.

Рис. 79: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.040
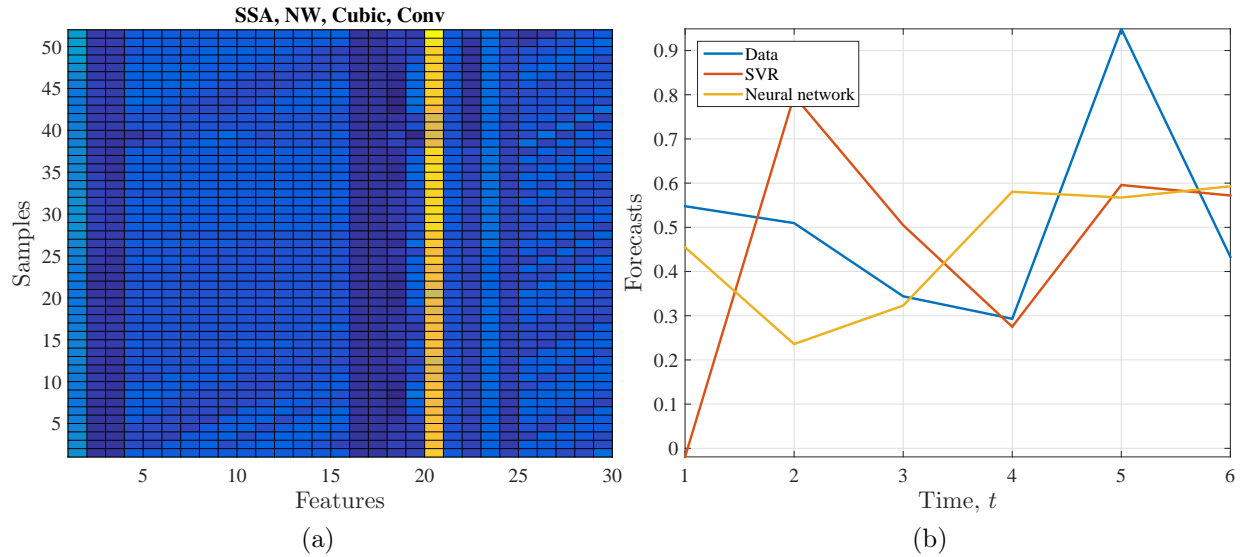
Рис. 80: (a) Feature generation results for NN3.040. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.040. Error exceeds 1000 for the following models: VAR, SVR, Neural network.The forecasts for VAR, SVR, Neural network are not displayed.

Рис. 81: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.041

(a)   (b)

Рис. 82: (a) Feature generation results for NN3.041. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.041. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
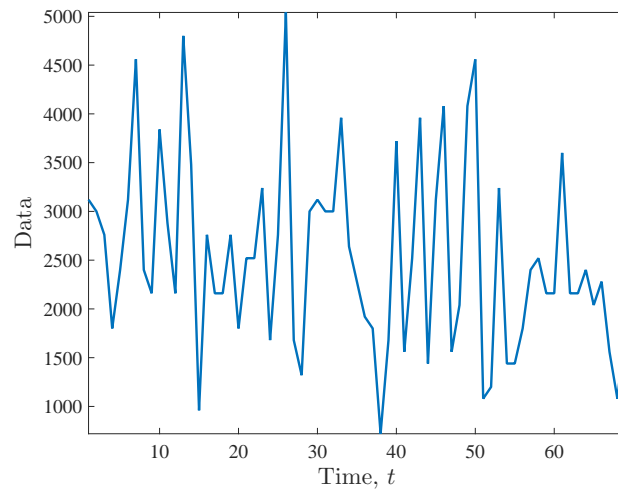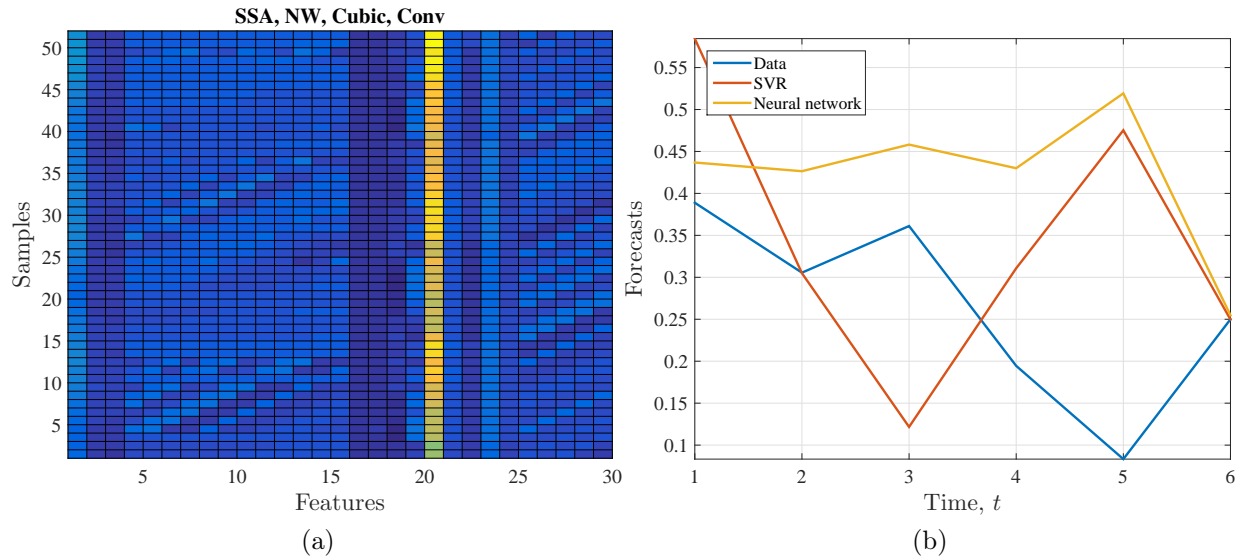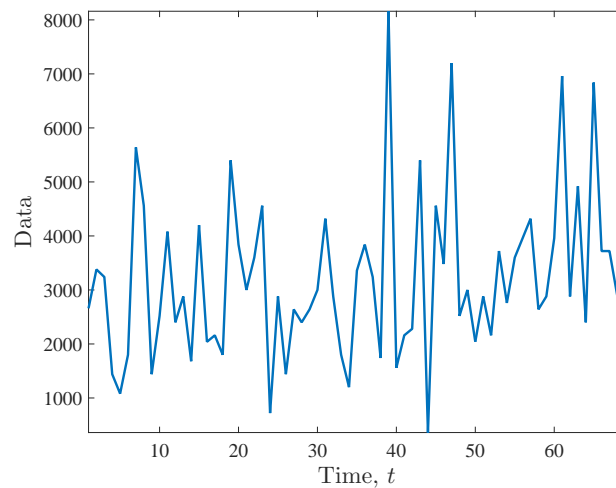

Рис. 83: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.042
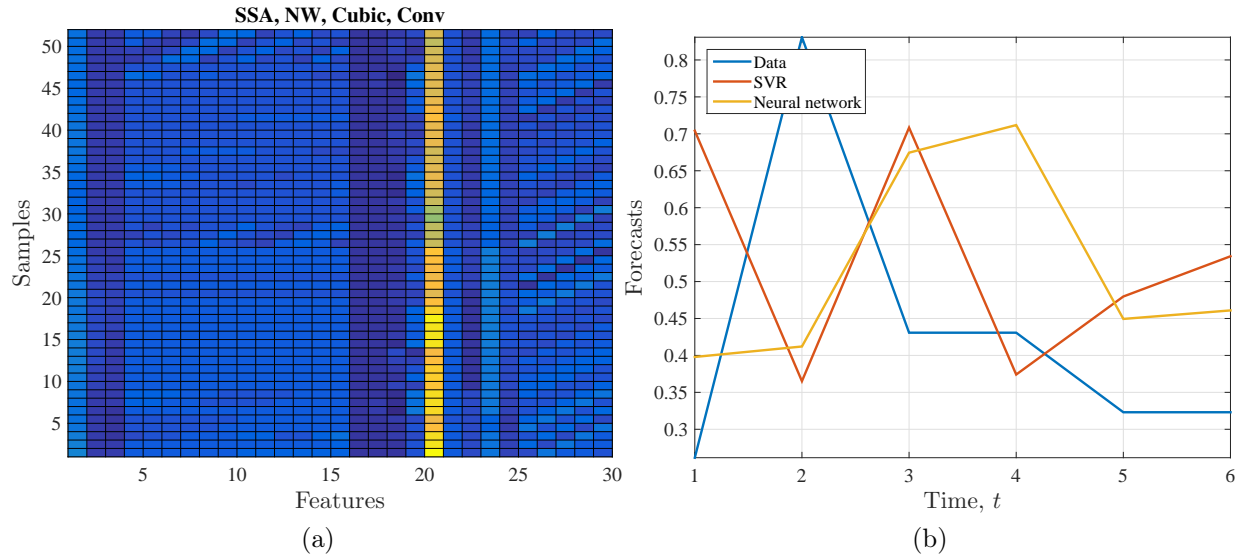
50

(a)   (b)

Рис. 84: (a) Feature generation results for NN3.042. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.042. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.

Рис. 85: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.043

(a)

(b)

Рис. 86: (a) Feature generation results for NN3.043. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.043. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
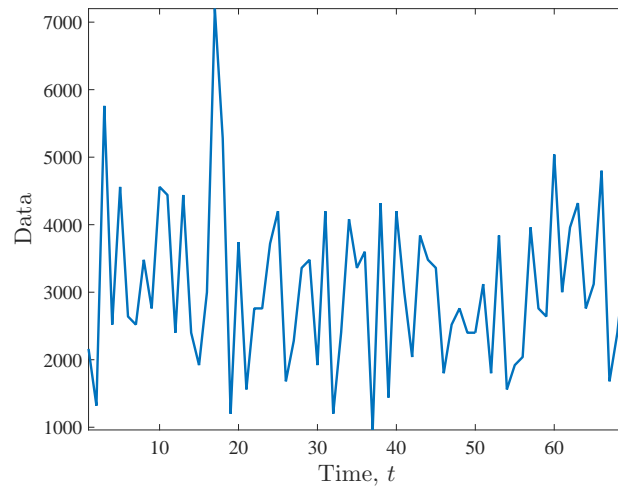

Рис. 87: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.044
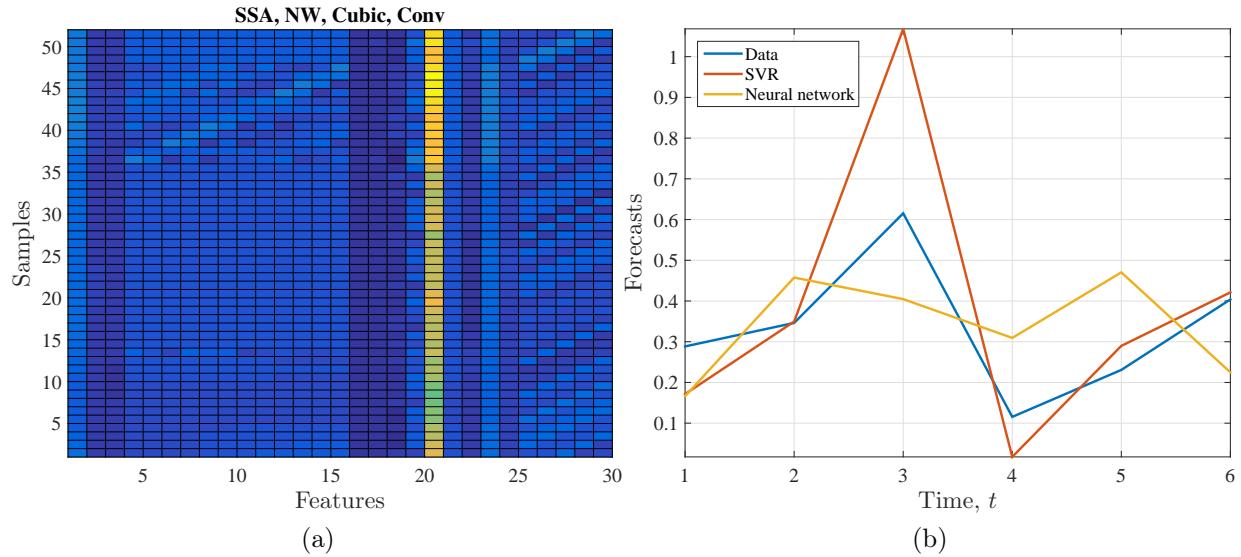
(a)   (b)

Рис. 88: (a) Feature generation results for NN3.044. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.044. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
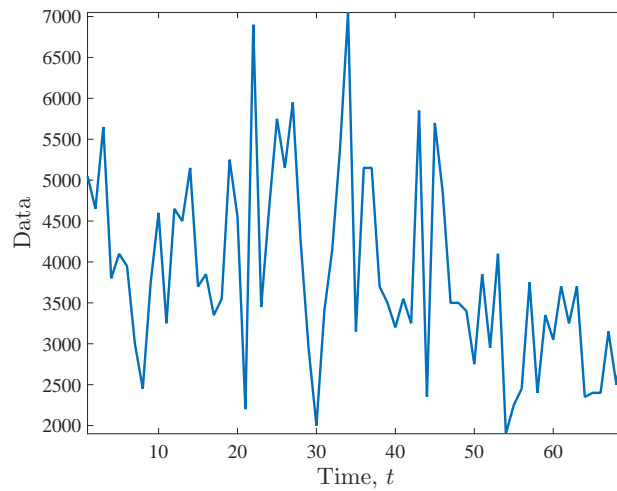

Рис. 89: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.045
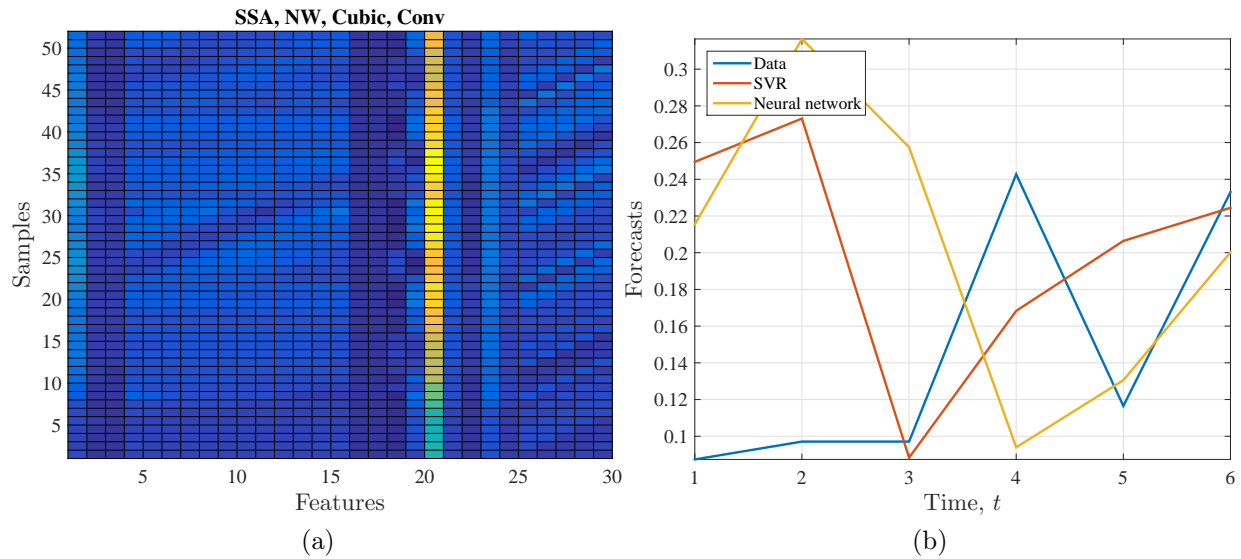
Рис. 90: (a) Feature generation results for NN3.045. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.045. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
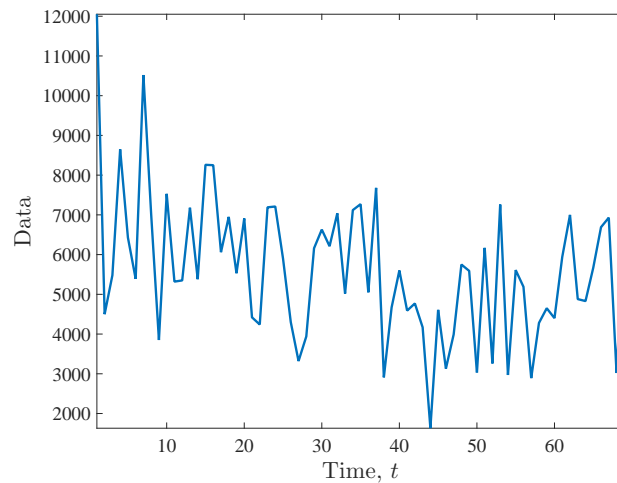

Рис. 91: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.046

Рис. 92: (a) Feature generation results for NN3.046. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.046. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.

Рис. 93: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.047
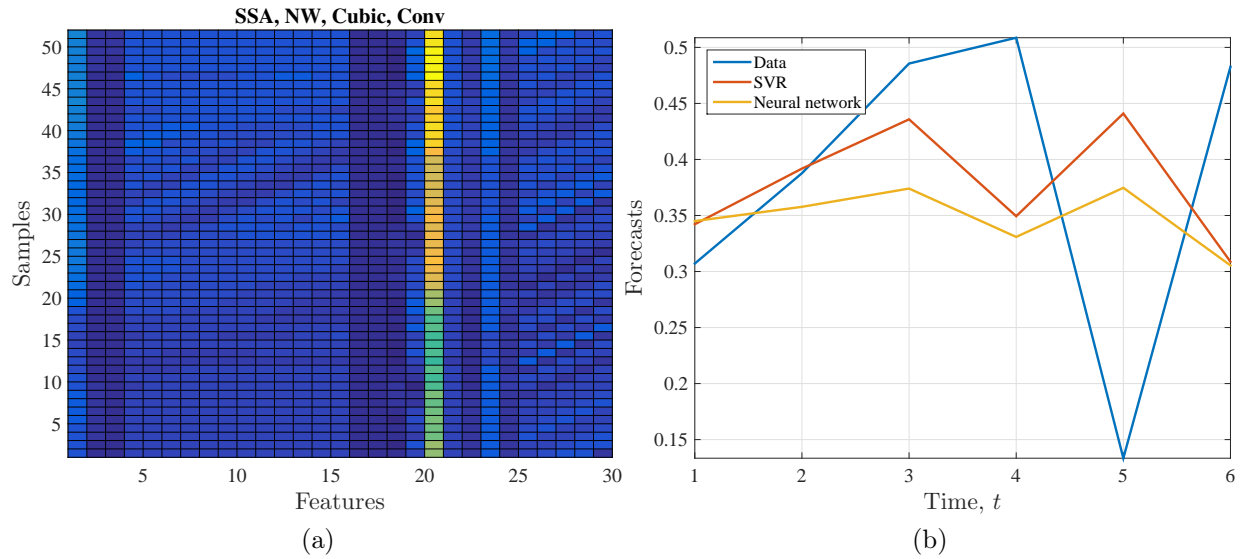
(a)   (b)

Рис. 94: (a) Feature generation results for NN3.047. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.047. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
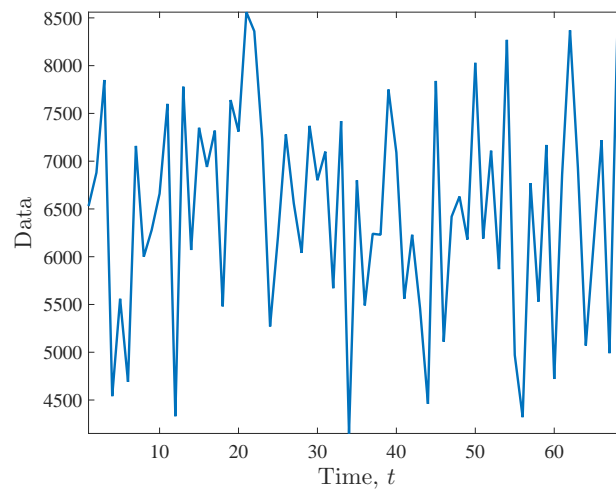

Рис. 95: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.048
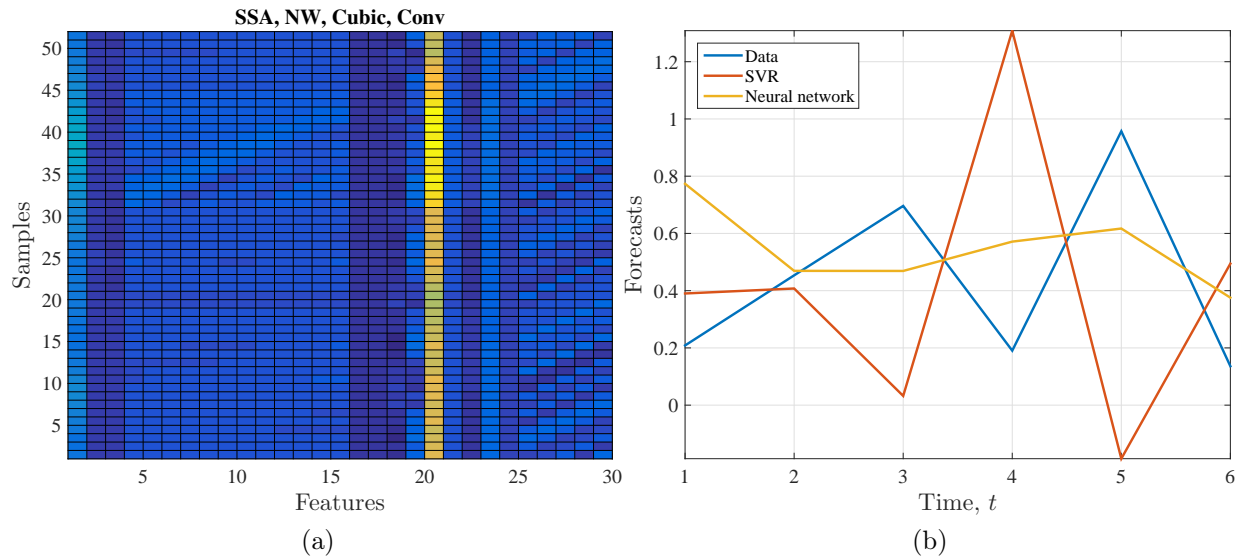
Рис. 96: (a) Feature generation results for NN3.048. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.048. SVR, Neural network Error exceeds 1000 for the following models: VAR.The forecasts for VAR are not displayed.
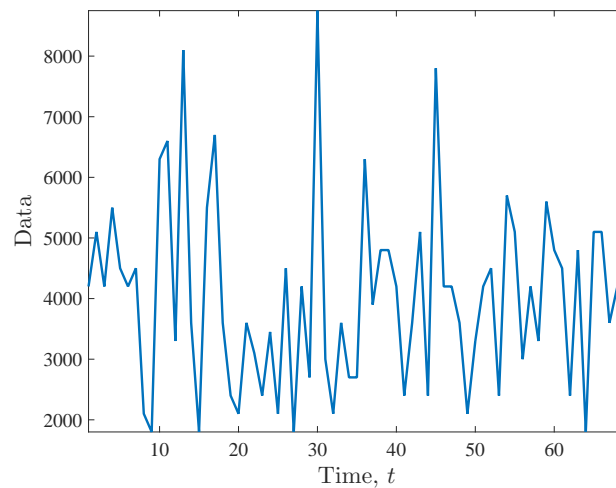

Рис. 97: Empirical business monthly time series. Data from the 2006/07 Forecasting Competition for Neural Networks (a) Target time series NN3.049
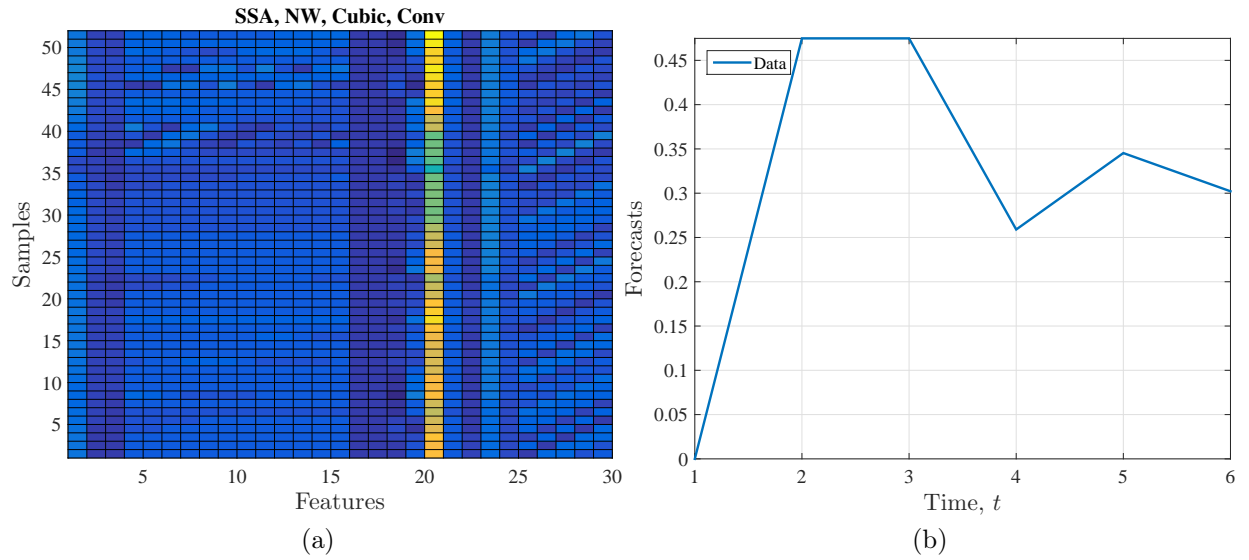
Рис. 98: (a) Feature generation results for NN3.049. SSA, NW, Cubic, Conv (b) Forecasting results for NN3.049. Error exceeds 1000 for the following models: VAR, SVR, Neural network.The forecasts for VAR, SVR, Neural network are not displayed.