

Activity 4

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anomalies_detected_evidence.csv
1 timestamp,user_id,event_type,message,hour_of_day,day_of_week,is_weekend,is_anomaly
2 2025-08-15 11:36:24.203669,user_1,login,User logged in from IP 192.168.1.145,11,Friday,False,1
3 2025-08-15 11:06:24.203679,user_5,network_connection,Connection to www.suspicious-site-3.com on port 8080,11,Friday,False,1
4 2025-08-15 10:53:24.203682,user_7,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,10,Friday,False,-1
5 2025-08-15 11:10:24.203683,UNKNOWN,network_connection,Connection to www.suspicious-site-1.com on port 8080,11,Friday,False,1
6 2025-08-15 11:25:24.203685,user_9,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,11,Friday,False,1
7 2025-08-15 11:26:24.203686,user_8,login,User logged in from IP 192.168.1.247,11,Friday,False,1
8 2025-08-15 10:16:24.203687,user_8,login,User logged in from IP 192.168.1.187,10,Friday,False,-1
9 2025-08-15 11:14:24.203688,user_9,logout,logout event.,11,Friday,False,1
10 2025-08-15 11:27:24.203689,user_10,login,User logged in from IP 192.168.1.132,11,Friday,False,1
11 2025-08-15 10:36:24.203689,user_9,file_access,Accessed sensitive document path: /home/user_9/docs/private_file_2.txt,10,Friday,False,-1
12 2025-08-15 11:08:24.203690,user_1,file_access,Accessed sensitive document path: /home/user_1/docs/private_file_1.txt,11,Friday,False,1
13 2025-08-15 10:22:24.203691,UNKNOWN,file_access,Accessed sensitive document path: /home/user_4/docs/private_file_5.txt,10,Friday,False,-1
14 2025-08-15 11:04:24.203692,user_6,logout,logout event.,11,Friday,False,1
15 2025-08-15 10:53:24.203693,user_4,logout,logout event.,10,Friday,False,-1
16 2025-08-15 11:22:24.203693,user_1,logout,logout event.,11,Friday,False,1
17 2025-08-15 10:13:24.203694,user_5,login,User logged in from IP 192.168.1.24,10,Friday,False,-1
18 2025-08-15 10:40:24.203695,UNKNOWN,file_access,Accessed sensitive document path: /home/user_3/docs/private_file_1.txt,10,Friday,False,-1
19 2025-08-15 11:31:24.203696,user_3,logout,logout event.,11,Friday,False,1
20 2025-08-15 10:26:24.203697,user_2,network_connection,UNKNOWN,10,Friday,False,-1
21 2025-08-15 11:37:24.203698,user_6,network_connection,Connection to www.suspicious-site-1.com on port 8080,11,Friday,False,1
22 2025-08-15 11:07:24.203699,user_5,file_access,Accessed sensitive document path: /home/user_5/docs/private_file_4.txt,11,Friday,False,1
23 2025-08-15 11:09:24.203700,user_1,login,User logged in from IP 192.168.1.172,11,Friday,False,1
24 2025-08-15 10:42:24.203701,user_4,file_access,Accessed sensitive document path: /home/user_4/docs/private_file_4.txt,10,Friday,False,-1
25 2025-08-15 11:41:24.203701,user_2,login,User logged in from IP 192.168.1.144,11,Friday,False,1
26 2025-08-15 10:28:24.203702,user_7,logout,logout event.,10,Friday,False,-1
27 2025-08-15 11:06:24.203703,user_7,file_access,Accessed sensitive document path: /home/user_7/docs/private_file_5.txt,11,Friday,False,1
28 2025-08-15 10:44:24.203704,UNKNOWN,file_access,Accessed sensitive document path: /home/user_7/docs/private_file_1.txt,10,Friday,False,-1
29 2025-08-15 11:29:24.203705,user_4,file_access,UNKNOWN,11,Friday,False,1
30 2025-08-15 11:12:24.203706,user_9,login,User logged in from IP 192.168.1.193,11,Friday,False,1
31 2025-08-15 11:33:24.203706,user_8,logout,logout event.,11,Friday,False,1
32 2025-08-15 10:21:24.203707,user_4,network_connection,Connection to www.suspicious-site-4.com on port 8080,10,Friday,False,-1
33 2025-08-15 10:54:24.203708,user_3,file_access,Accessed sensitive document path: /home/user_3/docs/private_file_3.txt,10,Friday,False,-1
34 2025-08-15 11:41:24.203709,user_6,file_access,Accessed sensitive document path: /home/user_6/docs/private_file_3.txt,11,Friday,False,1
35 2025-08-15 10:17:24.203710,user_9,login,User logged in from IP 192.168.1.95,10,Friday,False,-1
36 2025-08-15 10:53:24.203711,user_9,login,User logged in from IP 192.168.1.60,10,Friday,False,-1
37 2025-08-15 11:34:24.203711,user_4,network_connection,Connection to www.suspicious-site-5.com on port 8080,11,Friday,False,1
38 2025-08-15 11:02:24.203712,user_3,logout,logout event.,11,Friday,False,1
39 2025-08-15 10:42:24.203713,user_6,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,10,Friday,False,-1
40 2025-08-15 10:16:24.203714,user_6,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,10,Friday,False,-1
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1 anomalies_detected_evidence.csv
40 2025-08-15 10:10:24.203714,user_0,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,10,Friday,False,-1
41 2025-08-15 10:38:24.203715,user_4,login,User logged in from IP 192.168.1.77,10,Friday,False,-1
42 2025-08-15 10:23:24.203715,user_7,logout,logout event.,10,Friday,False,-1
43 2025-08-15 11:09:24.203716,user_10,network_connection,Connection to www.suspicious-site-5.com on port 8080,11,Friday,False,1
44 2025-08-15 11:48:24.203717,user_10,login,User logged in from IP 192.168.1.80,11,Friday,False,1
45 2025-08-15 11:18:24.203718,user_3,network_connection,Connection to www.suspicious-site-3.com on port 8080,11,Friday,False,1
46 2025-08-15 10:14:24.203718,user_10,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,10,Friday,False,-1
47 2025-08-15 11:52:24.203719,user_5,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,11,Friday,False,1
48 2025-08-15 11:27:24.203720,user_7,login,User logged in from IP 192.168.1.195,11,Friday,False,1
49 2025-08-15 11:01:24.203721,user_4,logout,logout event.,11,Friday,False,1
50 2025-08-15 11:52:24.203722,user_4,network_connection,Connection to www.suspicious-site-1.com on port 8080,11,Friday,False,1
51 2025-08-15 10:53:24.203722,user_9,file_access,Accessed sensitive document path: /home/user_9/docs/private_file_1.txt,10,Friday,False,-1
52 2025-08-15 11:28:24.203723,user_5,file_access,Accessed sensitive document path: /home/user_5/docs/private_file_2.txt,11,Friday,False,1
53 2025-08-15 10:55:24.203728,user_2,file_access,Accessed sensitive document path: /home/user_2/docs/private_file_4.txt,10,Friday,False,-1
54 2025-08-15 11:49:24.203729,user_9,logout,logout event.,11,Friday,False,1
55 2025-08-15 10:22:24.203730,user_3,file_access,Accessed sensitive document path: /home/user_3/docs/private_file_5.txt,10,Friday,False,-1
56 2025-08-15 10:45:24.203731,user_6,login,UNKNOWN,10,Friday,False,-1
57 2025-08-15 10:27:24.203731,user_10,login,User logged in from IP 192.168.1.234,10,Friday,False,-1
58 2025-08-15 11:46:24.203732,user_9,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,11,Friday,False,1
59 2025-08-15 11:37:24.203733,user_5,logout,logout event.,11,Friday,False,1
60 2025-08-15 10:23:24.203734,user_10,logout,logout event.,10,Friday,False,-1
61 2025-08-15 10:15:24.203735,user_2,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,10,Friday,False,-1
62 2025-08-15 10:44:24.203736,user_6,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,10,Friday,False,-1
63 2025-08-15 11:13:24.203736,user_4,logout,logout event.,11,Friday,False,1
64 2025-08-15 11:37:24.203737,user_8,login,User logged in from IP 192.168.1.84,11,Friday,False,1
65 2025-08-15 11:37:24.203738,user_10,logout,logout event.,11,Friday,False,1
66 2025-08-15 11:12:24.203739,user_2,network_connection,Connection to www.suspicious-site-5.com on port 8080,11,Friday,False,1
67 2025-08-15 10:14:24.203740,UNKNOWN,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,10,Friday,False,-1
68 2025-08-15 10:48:24.203740,user_7,file_access,Accessed sensitive document path: /home/user_7/docs/private_file_1.txt,10,Friday,False,-1
69 2025-08-15 11:50:24.203741,user_8,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,11,Friday,False,1
70 2025-08-15 10:34:24.203742,user_3,login,User logged in from IP 192.168.1.11,10,Friday,False,-1
71 2025-08-15 11:27:24.203743,user_7,file_access,UNKNOWN,11,Friday,False,1
72 2025-08-15 11:50:24.203743,user_3,login,UNKNOWN,11,Friday,False,1
73 2025-08-15 11:08:24.203744,user_4,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,11,Friday,False,1
74 2025-08-15 11:43:24.203745,user_2,logout,logout event.,11,Friday,False,1
75 2025-08-15 10:38:24.203746,user_10,file_access,Accessed sensitive document path: /home/user_10/docs/private_file_1.txt,10,Friday,False,-1
76 2025-08-15 11:28:24.203746,user_6,network_connection,Connection to www.suspicious-site-1.com on port 8080,11,Friday,False,1
77 2025-08-15 10:29:24.203747,user_10,logout,logout event.,10,Friday,False,-1
78 2025-08-15 11:18:24.203748,user_10,network_connection,Connection to www.suspicious-site-3.com on port 8080,11,Friday,False,1
79 2025-08-15 10:31:24.203749,user_7,logout,logout event.,10,Friday,False,-1
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1 anomalies_detected_evidence.csv
69 2025-08-15 11:50:24.203741,user_8,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,11,Friday,False,1
70 2025-08-15 10:34:24.203742,user_3,login,User logged in from IP 192.168.1.11,10,Friday,False,-1
71 2025-08-15 11:27:24.203743,user_7,file_access,UNKNOWN,11,Friday,False,1
72 2025-08-15 11:50:24.203743,user_3,login,UNKNOWN,11,Friday,False,1
73 2025-08-15 11:08:24.203744,user_4,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,11,Friday,False,1
74 2025-08-15 11:43:24.203745,user_2,logout,logout event.,11,Friday,False,1
75 2025-08-15 10:38:24.203746,user_10,file_access,Accessed sensitive document path: /home/user_10/docs/private_file_1.txt,10,Friday,False,-1
76 2025-08-15 11:28:24.203746,user_6,network_connection,Connection to www.suspicious-site-1.com on port 8080,11,Friday,False,1
77 2025-08-15 10:29:24.203747,user_10,logout,logout event.,10,Friday,False,-1
78 2025-08-15 11:18:24.203748,user_10,network_connection,Connection to www.suspicious-site-3.com on port 8080,11,Friday,False,1
79 2025-08-15 10:31:24.203749,user_7,logout,logout event.,10,Friday,False,-1
80 2025-08-15 11:20:24.203750,user_3,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,11,Friday,False,1
81 2025-08-15 11:51:24.203751,user_7,file_access,Accessed sensitive document path: /home/user_7/docs/private_file_5.txt,11,Friday,False,1
82 2025-08-15 10:22:24.203752,UNKNOWN,logout,logout event.,10,Friday,False,-1
83 2025-08-15 11:14:24.203752,user_8,file_access,Accessed sensitive document path: /home/user_8/docs/private_file_3.txt,11,Friday,False,1
84 2025-08-15 11:11:24.203753,UNKNOWN,logout,logout event.,11,Friday,False,1
85 2025-08-15 11:35:24.203754,user_7,login,User logged in from IP 192.168.1.201,11,Friday,False,1
86 2025-08-15 10:18:24.203755,user_2,login,User logged in from IP 192.168.1.53,10,Friday,False,-1
87 2025-08-15 10:25:24.203755,UNKNOWN,login,User logged in from IP 192.168.1.181,10,Friday,False,-1
88 2025-08-15 10:54:24.203756,user_10,login,User logged in from IP 192.168.1.83,10,Friday,False,-1
89 2025-08-15 11:02:24.203757,user_2,login,User logged in from IP 192.168.1.55,11,Friday,False,1
90 2025-08-15 10:13:24.203758,user_3,file_access,Accessed sensitive document path: /home/user_3/docs/private_file_1.txt,10,Friday,False,-1
91 2025-08-15 10:43:24.203758,user_6,network_connection,Connection to www.suspicious-site-2.com on port 8080,10,Friday,False,-1
92 2025-08-15 10:51:24.203759,user_5,login,User logged in from IP 192.168.1.51,10,Friday,False,-1
93 2025-08-15 10:43:24.203760,user_3,email_sent,Email sent from Jane Doe to John Doe about Project X and the London office.,10,Friday,False,-1
94 2025-08-15 10:47:24.203761,UNKNOWN,login,User logged in from IP 192.168.1.63,10,Friday,False,-1
95 2025-08-15 11:35:24.203762,user_3,network_connection,Connection to www.suspicious-site-4.com on port 8080,11,Friday,False,1
96 2025-08-15 11:46:24.203762,user_7,logout,logout event.,11,Friday,False,1
97 2025-08-15 11:50:24.203763,user_9,network_connection,Connection to www.suspicious-site-5.com on port 8080,11,Friday,False,1
98 2025-08-15 10:52:24.203764,UNKNOWN,file_access,Accessed sensitive document path: /home/user_4/docs/private_file_2.txt,10,Friday,False,-1
99 2025-08-15 10:22:24.203765,user_5,login,User logged in from IP 192.168.1.49,10,Friday,False,-1
100 2025-08-15 11:43:24.203765,user_10,file_access,Accessed sensitive document path: /home/user_10/docs/private_file_4.txt,11,Friday,False,1
101 2025-08-15 11:49:24.203766,user_6,logout,logout event.,11,Friday,False,1
102
```

Activity 5

```
extracted_entities.csv
1  index,entity_text,entity_label
2  0,IP 192.168.1.145,ORG
3  1,8080,CARDINAL
4  2,Email,PERSON
5  2,Jane Doe,PERSON
6  2,John Doe,PERSON
7  2,Project X,ORG
8  2,London,GPE
9  3,8080,CARDINAL
10 4,Email,PERSON
11 4,Jane Doe,PERSON
12 4,John Doe,PERSON
13 4,Project X,ORG
14 4,London,GPE
15 5,IP 192.168.1.247,ORG
16 6,IP,ORG
17 8,IP,ORG
18 8,192.168.1.132,CARDINAL
19 15,IP,ORG
20 15,192.168.1.24,CARDINAL
21 19,8080,CARDINAL
22 23,IP 192.168.1.144,ORG
23 28,IP 192.168.1.193,ORG
24 30,8080,CARDINAL
25 33,192.168.1.95,CARDINAL
26 34,IP,ORG
27 34,192.168.1.60,CARDINAL
28 35,8080,CARDINAL
29 37,Email,PERSON
30 37,Jane Doe,PERSON
31 37,John Doe,PERSON
32 37,Project X,ORG
33 37,London,GPE
34 38,Email,PERSON
35 38,Jane Doe,PERSON
36 38,John Doe,PERSON
37 38,Project X,ORG
38 38,London,GPE
39 39,IP 192.168.1.77,ORG
40 41,8080,CARDINAL
```

```
extracted_entities.csv
40 41,8080,CARDINAL
41 42,192.168.1.80,CARDINAL
42 43,8080,CARDINAL
43 44,Email,PERSON
44 44,Jane Doe,PERSON
45 44,John Doe,PERSON
46 44,Project X,ORG
47 44,London,GPE
48 45,Email,PERSON
49 45,Jane Doe,PERSON
50 45,John Doe,PERSON
51 45,Project X,ORG
52 45,London,GPE
53 46,IP 192.168.1.195,ORG
54 48,8080,CARDINAL
55 55,IP 192.168.1.234,ORG
56 56,Email,PERSON
57 56,Jane Doe,PERSON
58 56,John Doe,PERSON
59 56,Project X,ORG
60 56,London,GPE
61 59,Email,PERSON
62 59,Jane Doe,PERSON
63 59,John Doe,PERSON
64 59,Project X,ORG
65 59,London,GPE
66 60,Email,PERSON
67 60,Jane Doe,PERSON
68 60,John Doe,PERSON
69 60,Project X,ORG
70 60,London,GPE
71 62,IP 192.168.1.84,ORG
72 64,8080,CARDINAL
73 65,Email,PERSON
74 65,Jane Doe,PERSON
75 65,John Doe,PERSON
76 65,Project X,ORG
77 65,London,GPE
78 67,Email,PERSON
79 67,Jane Doe,PERSON
```

extracted_entities.csv

```
80 67,John Doe,PERSON
81 67,Project X,ORG
82 67,London,GPE
83 68,IP,ORG
84 68,192.168.1.11,CARDINAL
85 71,Email,PERSON
86 71,Jane Doe,PERSON
87 71,John Doe,PERSON
88 71,Project X,ORG
89 71,London,GPE
90 74,8080,CARDINAL
91 76,8080,CARDINAL
92 78,Email,PERSON
93 78,Jane Doe,PERSON
94 78,John Doe,PERSON
95 78,Project X,ORG
96 78,London,GPE
97 83,IP,ORG
98 84,IP,ORG
99 84,192.168.1.53,CARDINAL
100 85,IP 192.168.1.181,ORG
101 86,IP,ORG
102 86,192.168.1.83,CARDINAL
103 87,IP 192.168.1.55,ORG
104 89,8080,CARDINAL
105 90,IP,ORG
106 90,192.168.1.51,CARDINAL
107 91,Email,PERSON
108 91,Jane Doe,PERSON
109 91,John Doe,PERSON
110 91,Project X,ORG
111 91,London,GPE
112 92,IP,ORG
113 92,192.168.1.63,CARDINAL
114 93,8080,CARDINAL
115 95,8080,CARDINAL
116 97,IP,ORG
117 97,192.168.1.49,CARDINAL
```