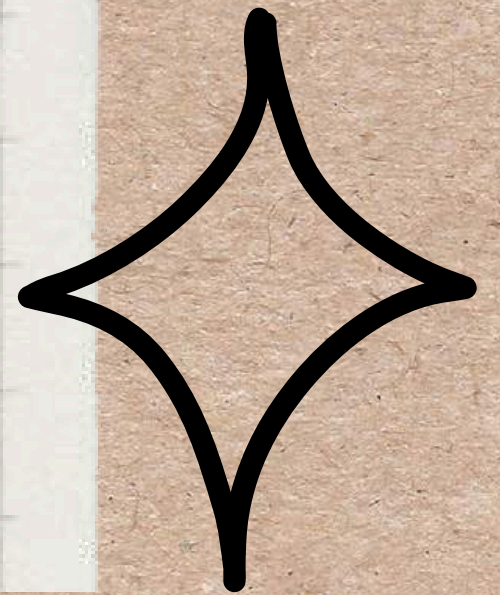
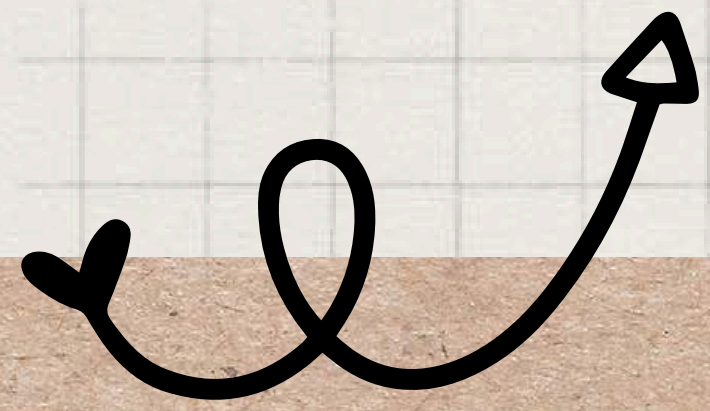




RSSI FINGERPRINTING

Update

By Satchukan Sinsuwanrak



Training Phase

Database ៤៣

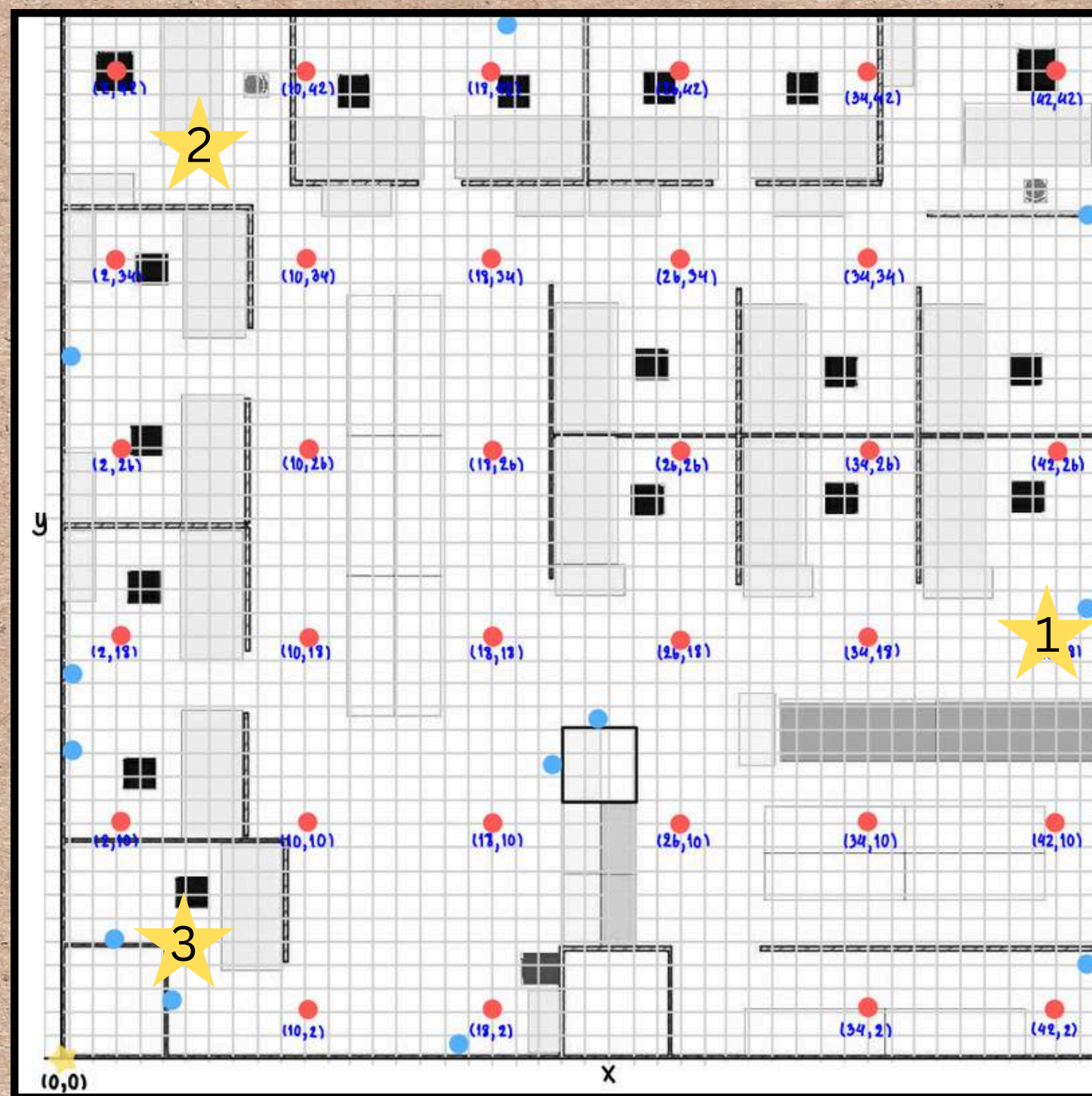
No	x	y	E5:53:39:5	F8:9D:4B:5	FD:AF:34:5	C6:62:EC:5	D6:77:D9:5	FA:C4:4A:5	C4:35:CE:5	CC:7F:D5:5	D7:B8:72:5	C5:EB:92:5	C2:80:A9:5	FC:92:D5:14:99:90
1	10	2	-65	-59	-54	-44	-55	-56	-55	-56	-52	-69	-68	-68
2	18	2	-68	-61	-41	-48	-54	-58	-55	-54	-53	-70	-69	-72
3	34	2	-74	-72	-67	-69	-73	-75	-70	-73	-68	-71	-71	-57
4	42	2	-70	-72	-65	-70	-73	-71	-58	-65	-64	-74	-63	-48
5	2	10	-65	-54	-55	-53	-42	-45	-48	-57	-51	-70	-65	-70
6	10	10	-63	-53	-52	-49	-53	-55	-48	-53	-50	-64	-65	-69
7	18	10	-63	-52	-43	-52	-50	-55	-53	-54	-53	-64	-66	-66
8	26	10	-67	-73	-67	-74	-69	-71	-72	-70	-63	-74	-67	-63
9	34	10	-75	-78	-71	-73	-78	-75	-74	-75	-73	-78	-67	-65
10	42	10	-80	-82	-80	-78	-77	-80	-77	-80	-73	-77	-72	-65
11	2	18	-65	-55	-58	-59	-46	-46	-43	-52	-56	-66	-59	-68
12	10	18	-64	-57	-62	-66	-54	-61	-52	-57	-56	-66	-66	-75
13	18	18	-49	-45	-50	-57	-53	-57	-48	-51	-46	-60	-54	-61
14	26	18	-65	-69	-72	-76	-75	-71	-62	-71	-63	-69	-66	-73
15	34	18	-61	-65	-69	-69	-68	-69	-58	-57	-59	-61	-52	-63
16	42	18	-62	-67	-68	-71	-65	-66	-58	-55	-57	-60	-42	-65
17	2	26	-66	-60	-61	-72	-61	-62	-56	-50	-60	-67	-64	-74
18	10	26	-68	-64	-66	-77	-67	-68	-62	-62	-60	-77	-75	-80

Training Phase

Database ใหม่ : เพิ่มการเก็บข้อมูลเป็นจุดละ 4 ทิศ

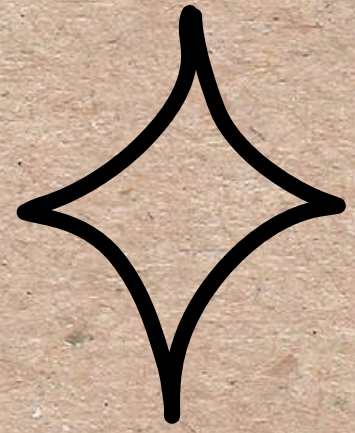
No	x	y	direction	E5:53:39:5	F8:9D:4B::	FD:AF:34::	C6:62:EC::	D6:77:D9:	FA:C4:4A:	C4:35:CE:	CC:7F:D5:	D7:B8:72:	C5:EB:92::	C2:80:A9::	FC:92:D5:14:99:90
1	10	2	N	-68	-56	-49	-46	-56	-61	-51	-58	-52	-67	-69	-68
1	10	2	E	-70	-58	-56	-45	-55	-58	-60	-58	-59	-69	-71	-71
1	10	2	S	-65	-60	-52	-43	-49	-52	-51	-55	-45	-69	-67	-68
1	10	2	W	-59	-60	-57	-44	-58	-54	-63	-53	-54	-73	-67	-65
2	18	2	N	-70	-61	-41	-49	-55	-64	-55	-52	-54	-65	-69	-67
2	18	2	E	-69	-59	-40	-45	-51	-59	-46	-55	-53	-70	-65	-73
2	18	2	S	-63	-56	-44	-56	-54	-53	-57	-55	-51	-71	-68	-73
2	18	2	W	-70	-66	-44	-46	-58	-60	-61	-56	-51	-73	-72	-74
3	34	2	N	-78	-75	-69	-72	-75	-82	-77	-72	-70	-72	-76	-66
3	34	2	E	-74	-74	-70	-74	-77	-74	-72	-80	-78	-75	-71	-60
3	34	2	S	-67	-68	-63	-67	-71	-76	-57	-76	-58	-68	-70	-52
3	34	2	W	-74	-73	-65	-61	-70	-71	-69	-67	-64	-70	-66	-53
4	42	2	N	-68	-76	-67	-70	-72	-70	-58	-66	-69	-76	-70	-46
4	42	2	E	-72	-69	-62	-65	-73	-69	-55	-62	-60	-74	-62	-49
4	42	2	S	-67	-71	-66	-71	-76	-71	-62	-64	-60	-74	-59	-47
4	42	2	W	-74	-76	-62	-72	-71	-73	-60	-66	-60	-71	-62	-49
5	2	10	N	-60	-51	-54	-46	-37	-47	-54	-57	-55	-71	-66	-72
5	2	10	E	-67	-57	-59	-53	-41	-43	-47	-59	-49	-69	-66	-67
5	2	10	S	-65	-57	-55	-59	-42	-46	-43	-55	-51	-71	-72	-72
5	2	10	W	-65	-53	-53	-53	-48	-46	-46	-57	-51	-68	-59	-68

Test Phase

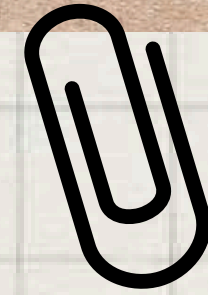


ทดลองหาตำแหน่งที่จุด 3
จุดเดิมด้วยวิธี

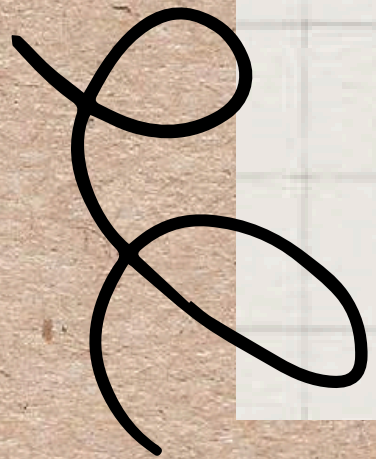
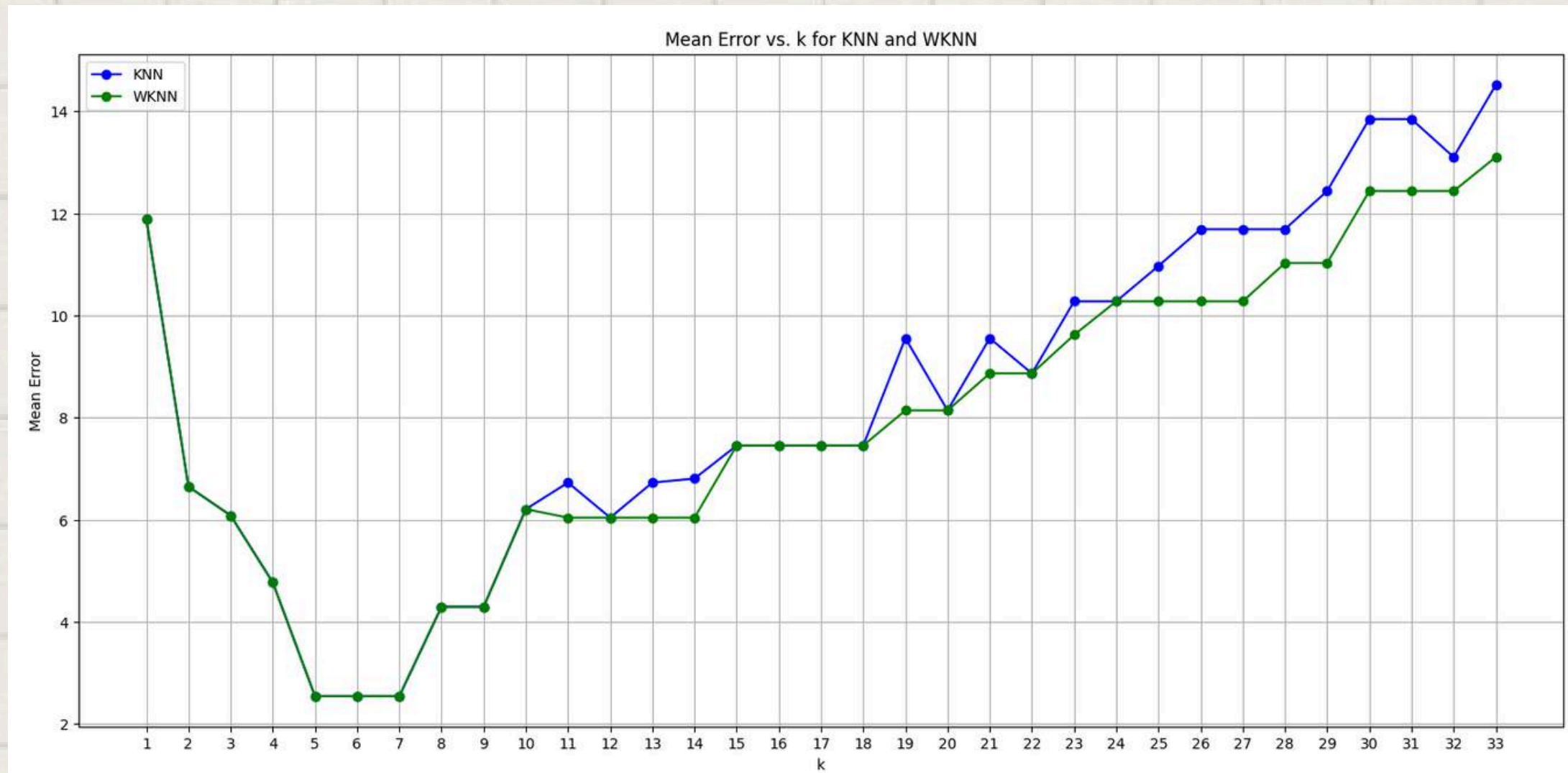
- k-Nearest Neighbors (**KNN**)
- Weight KNN (**WKNN**)
- Support Vector Machines (**SVM**)



Test Phase

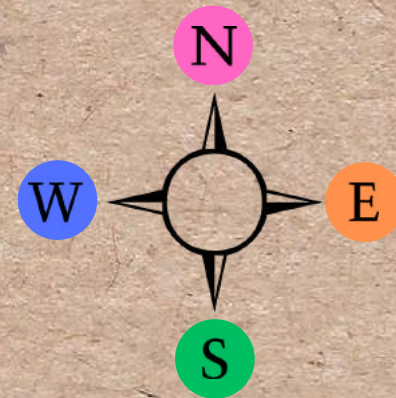
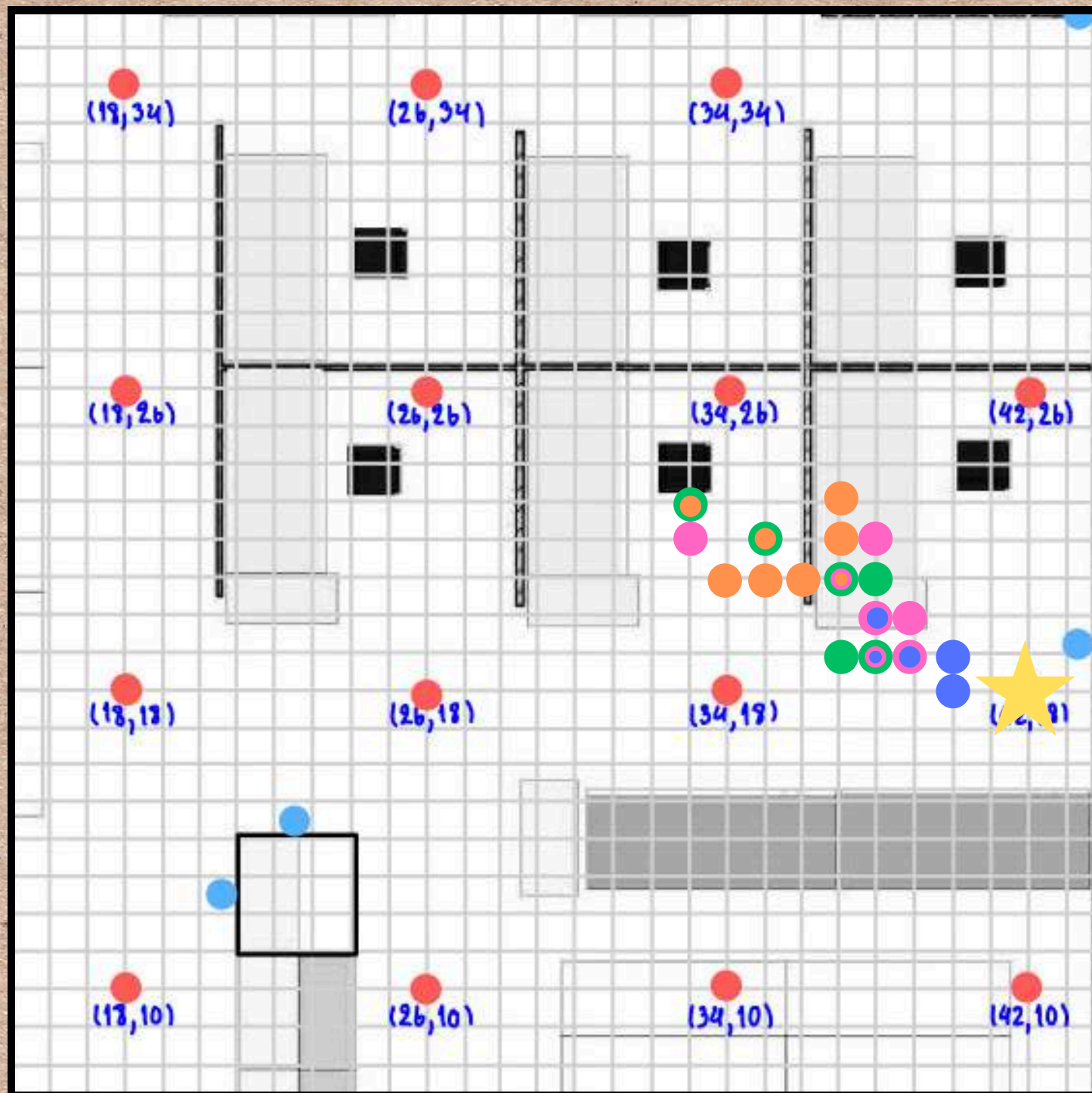


เปรียบเทียบ KNN กับ WKNN และหาค่า k ที่ดีที่สุด (เลือก k=6)



Test Phase

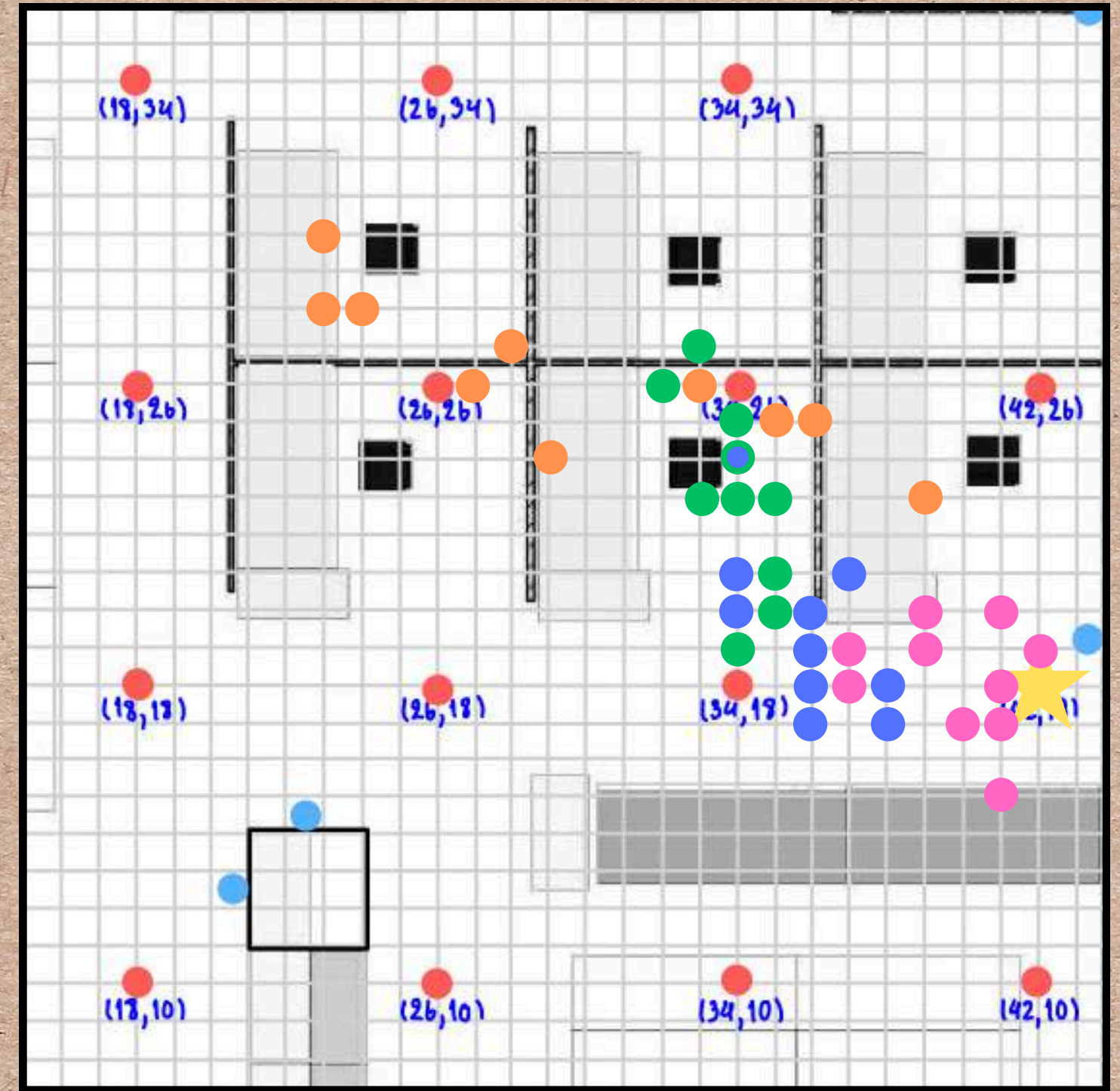
5



WKNN

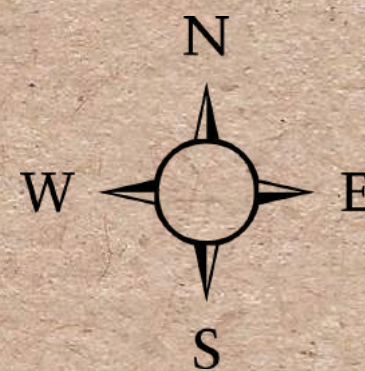
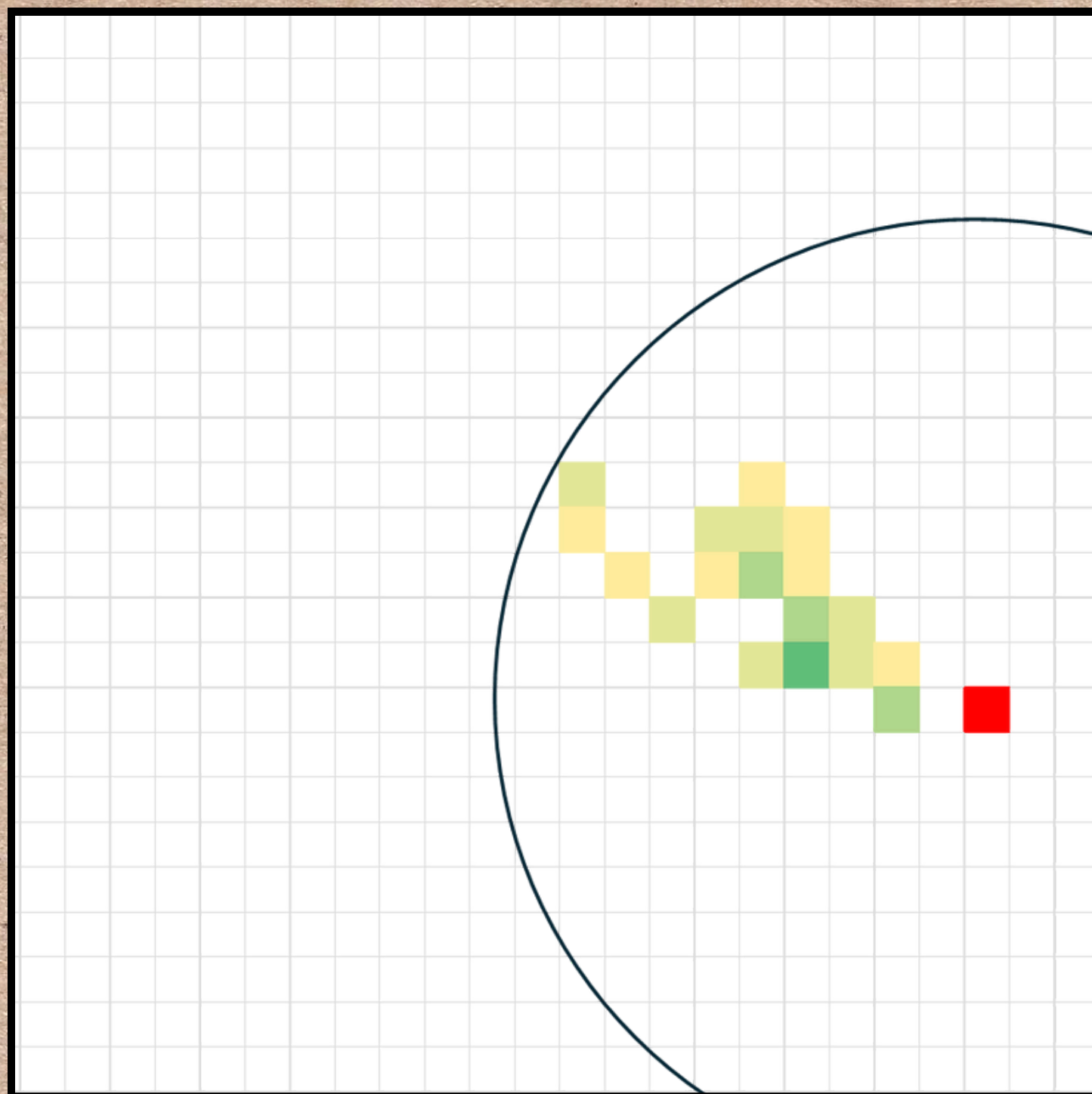


SVM



Test Phase

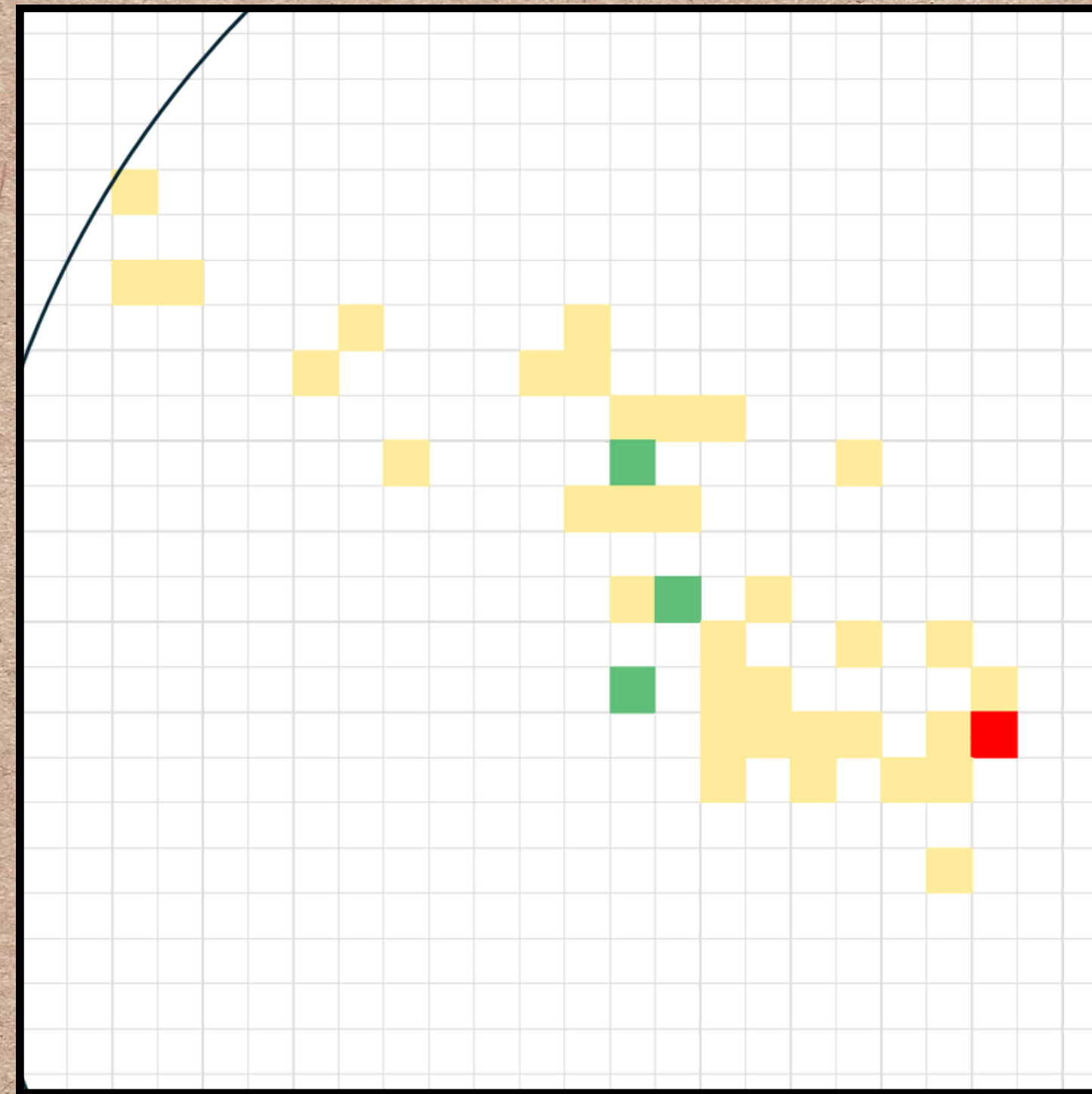
6



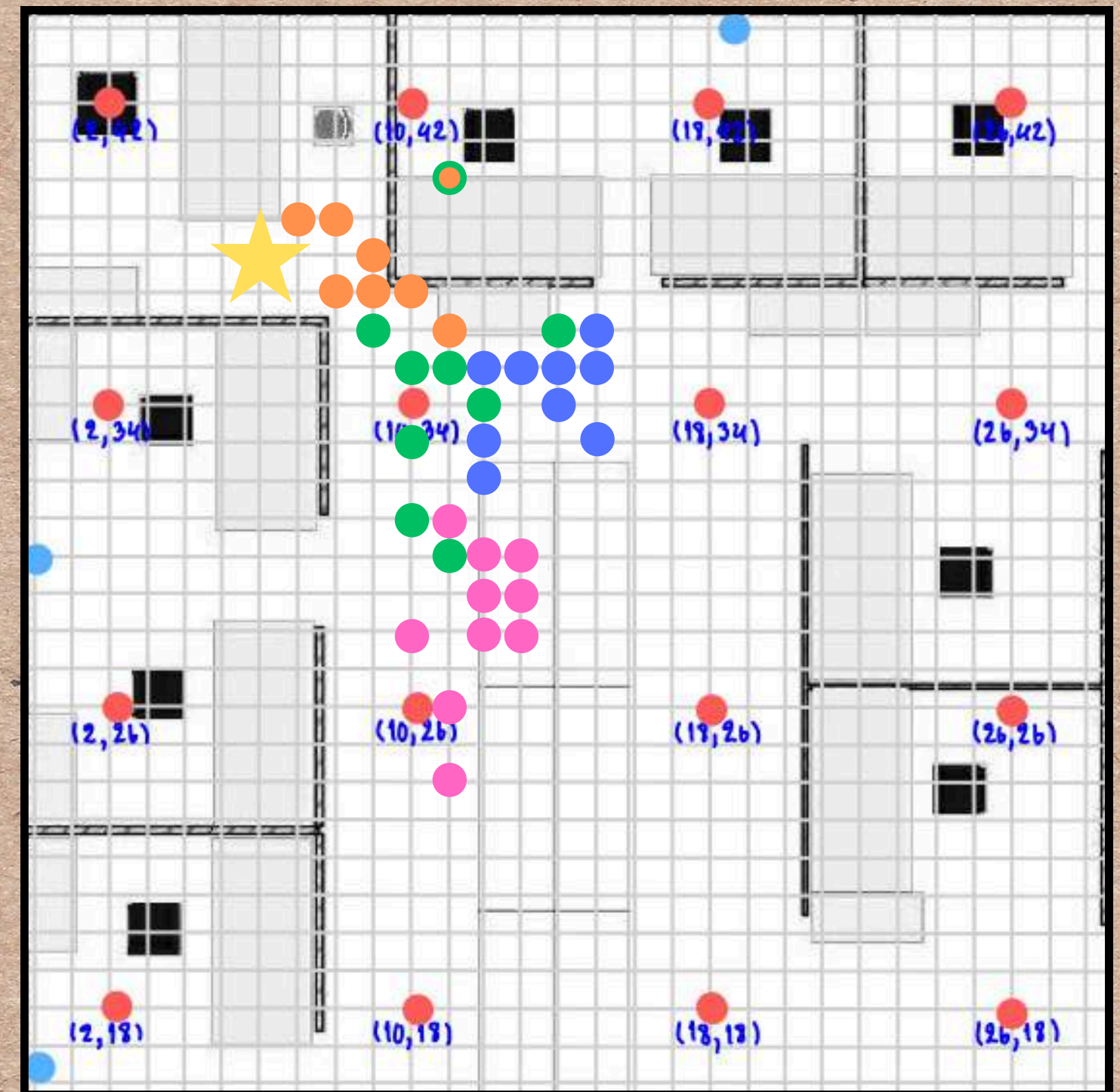
WKNN



SVM

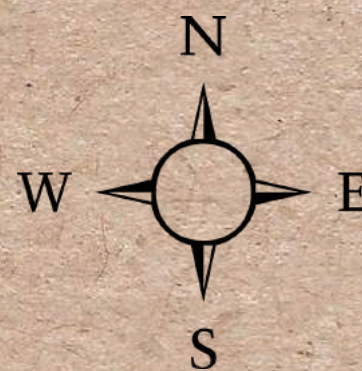
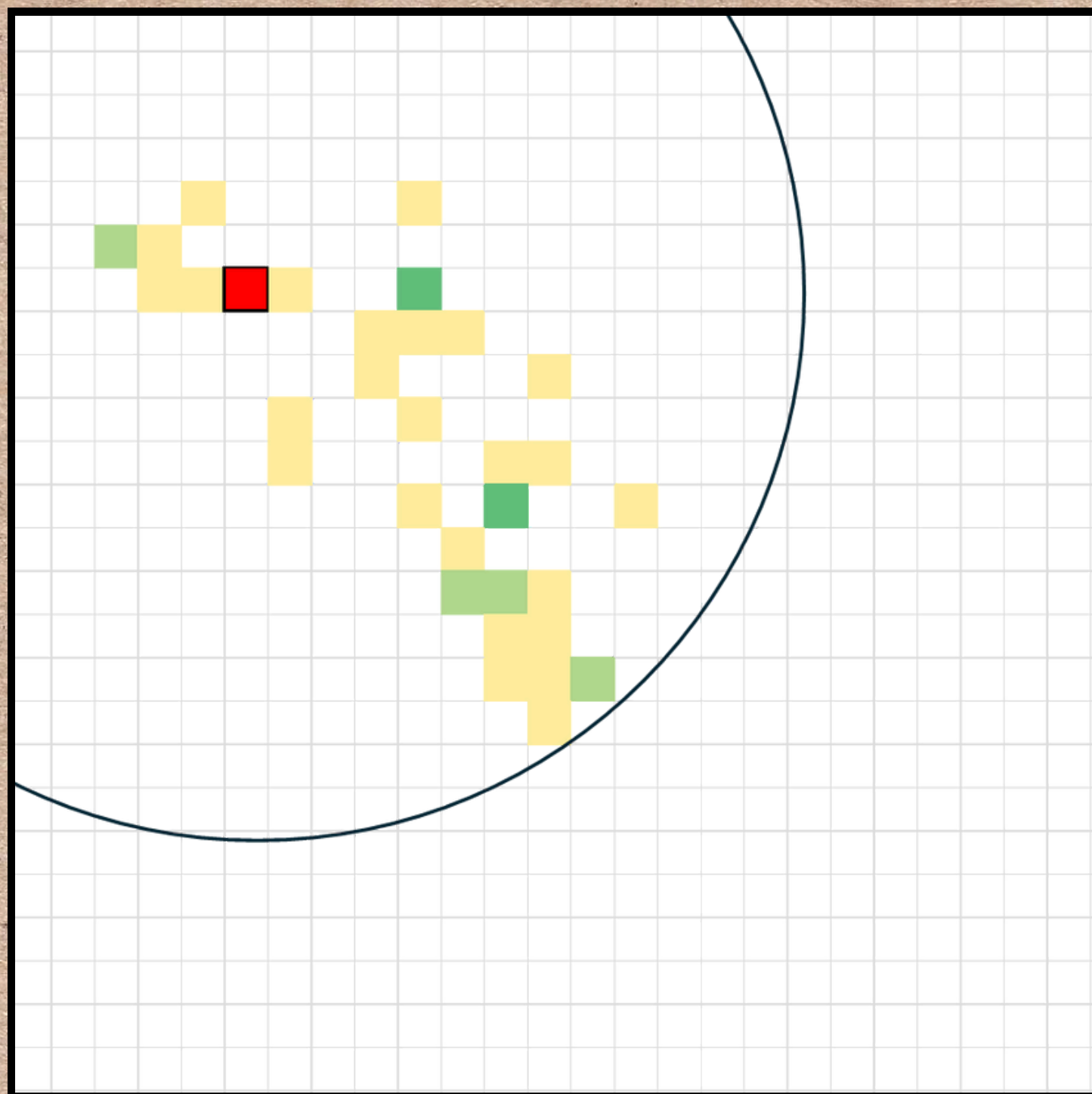


7



Test Phase

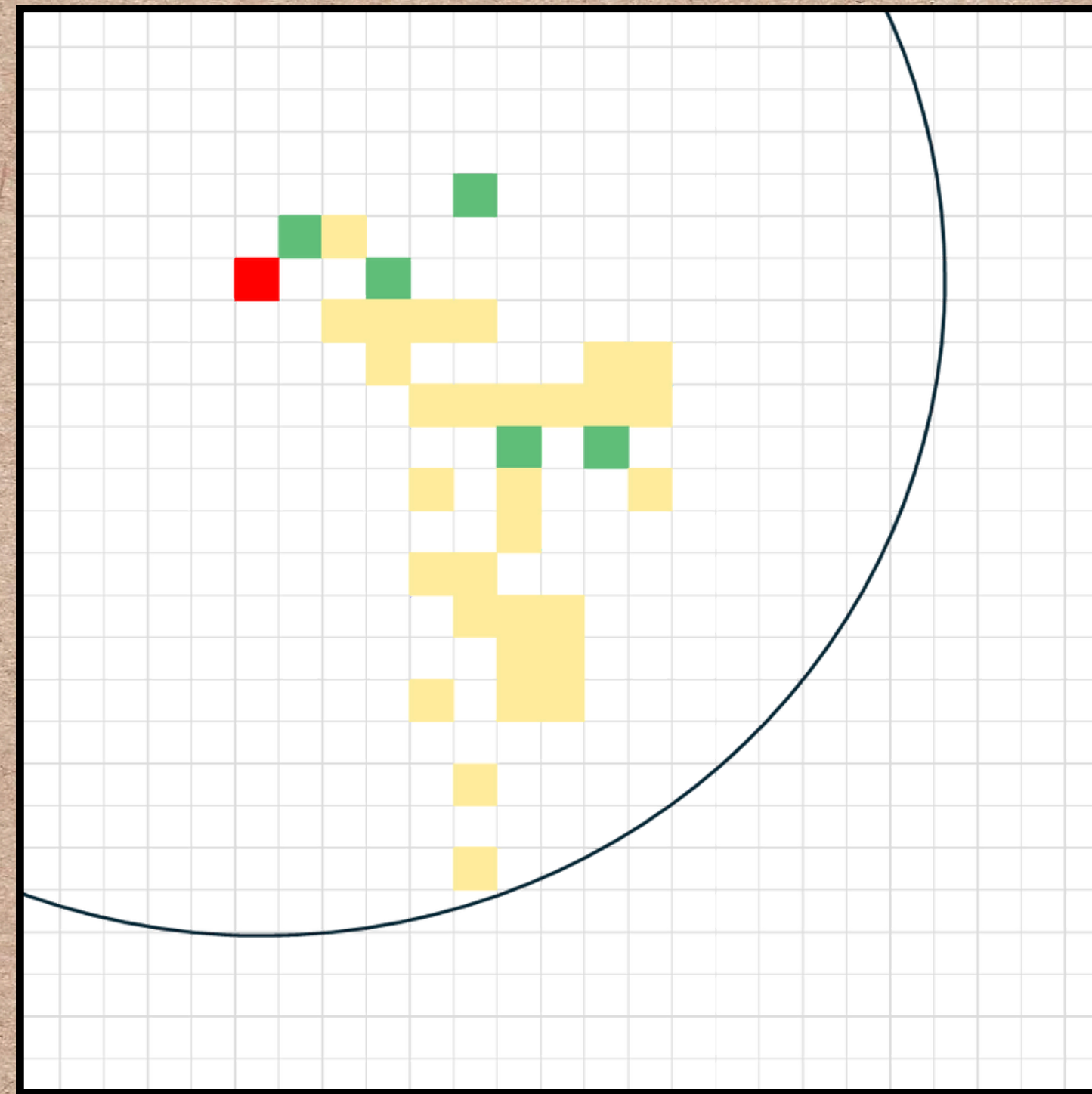
8



WKNN

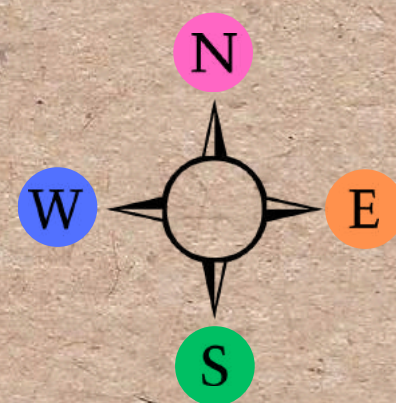
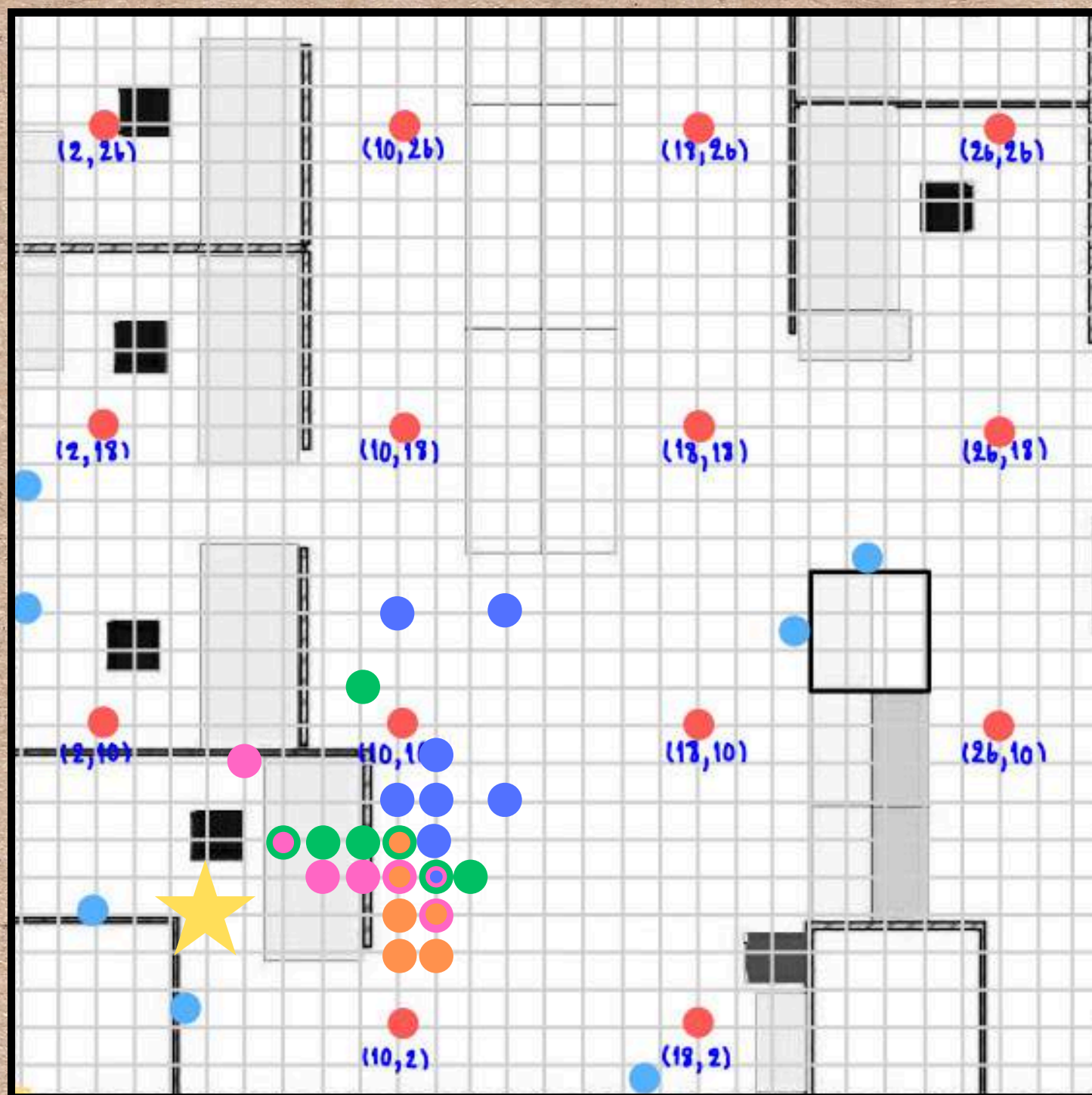


SVM



Test Phase

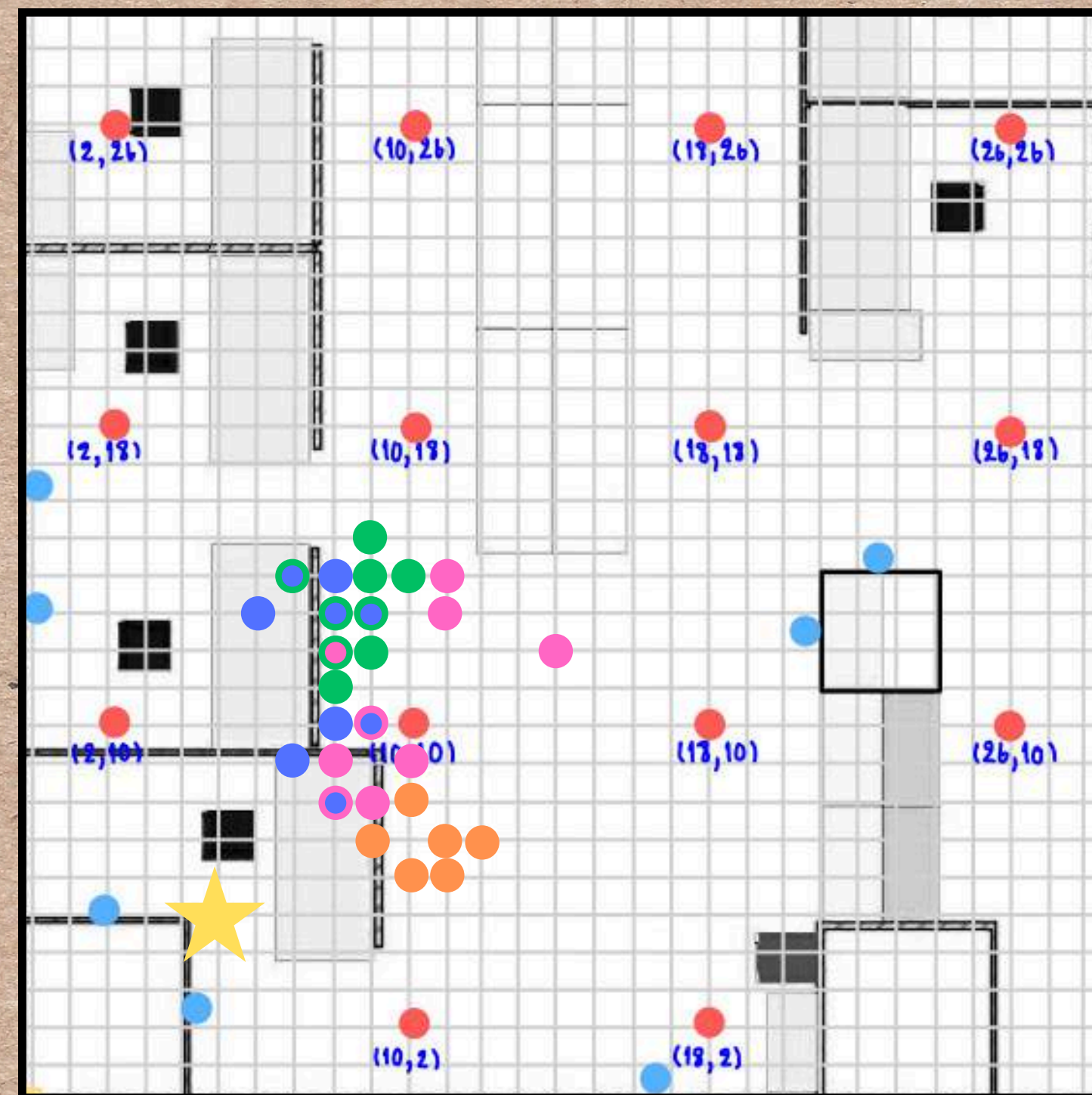
W9



WKNN



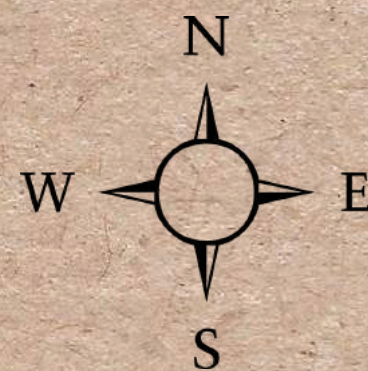
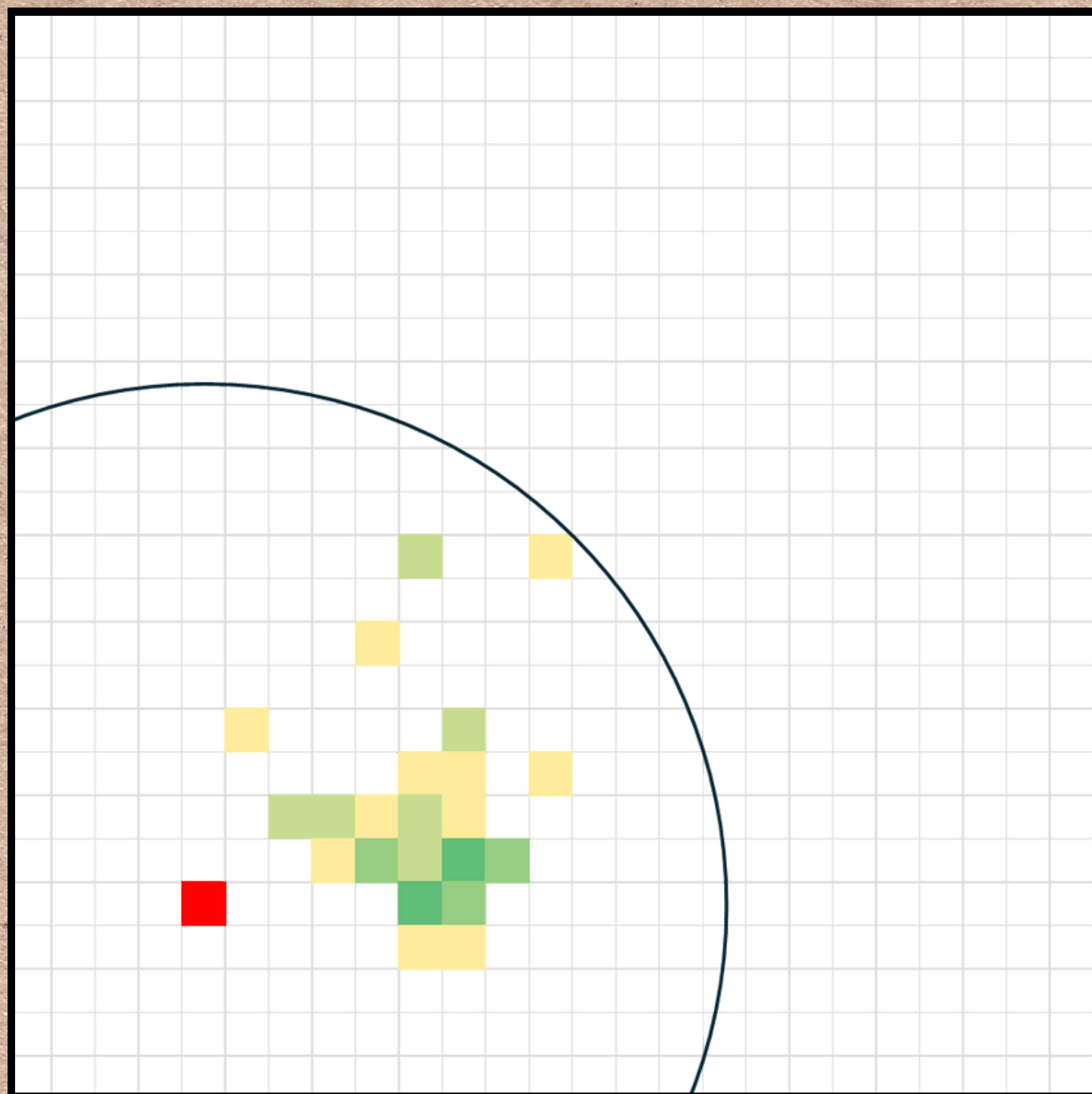
SVM



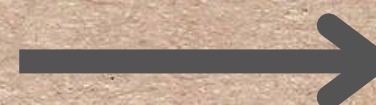
Test Phase

10

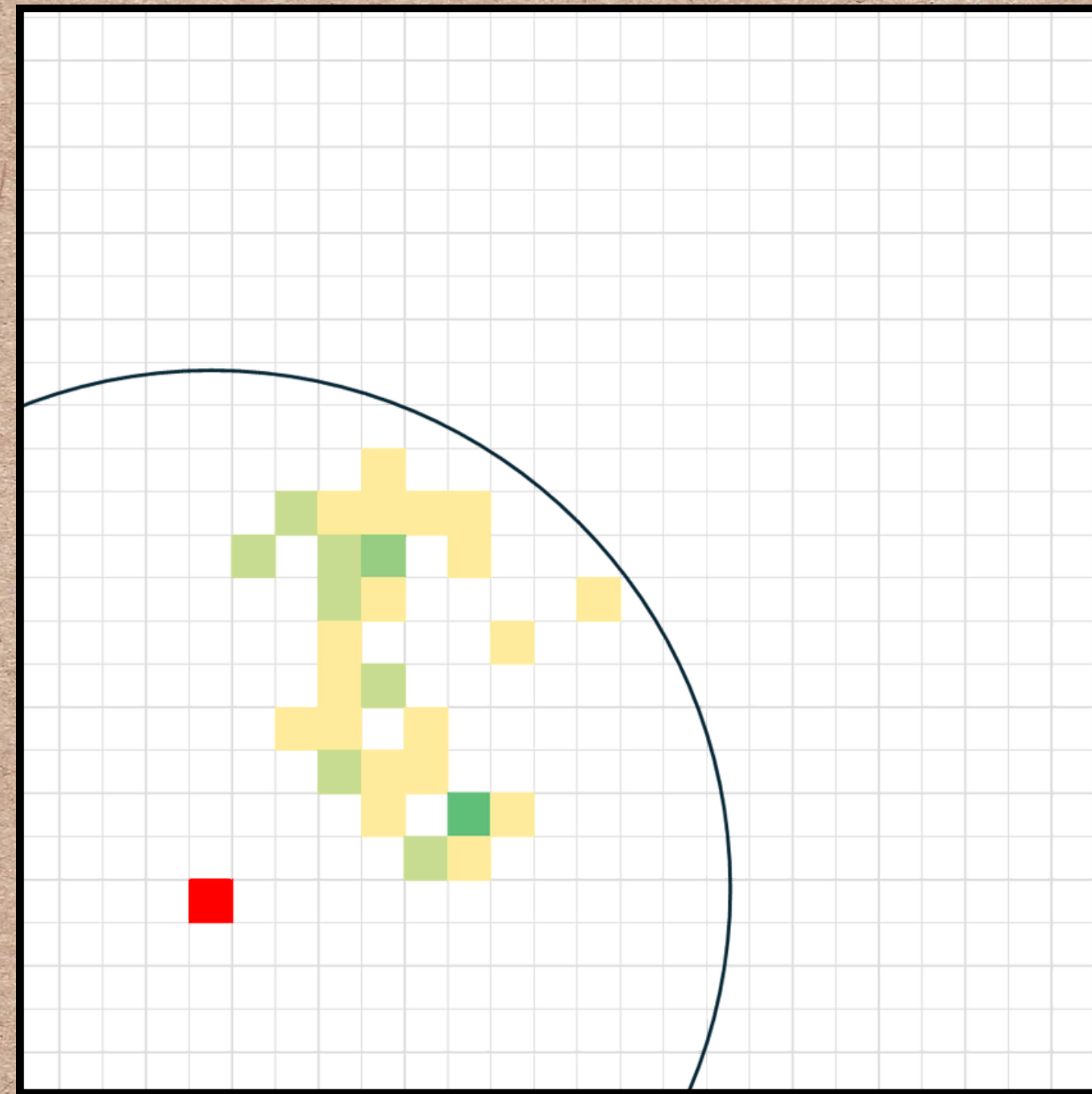
[Handwritten signature]



WKNN



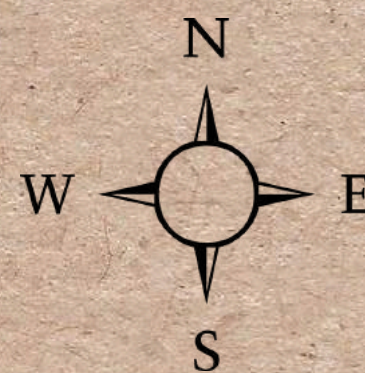
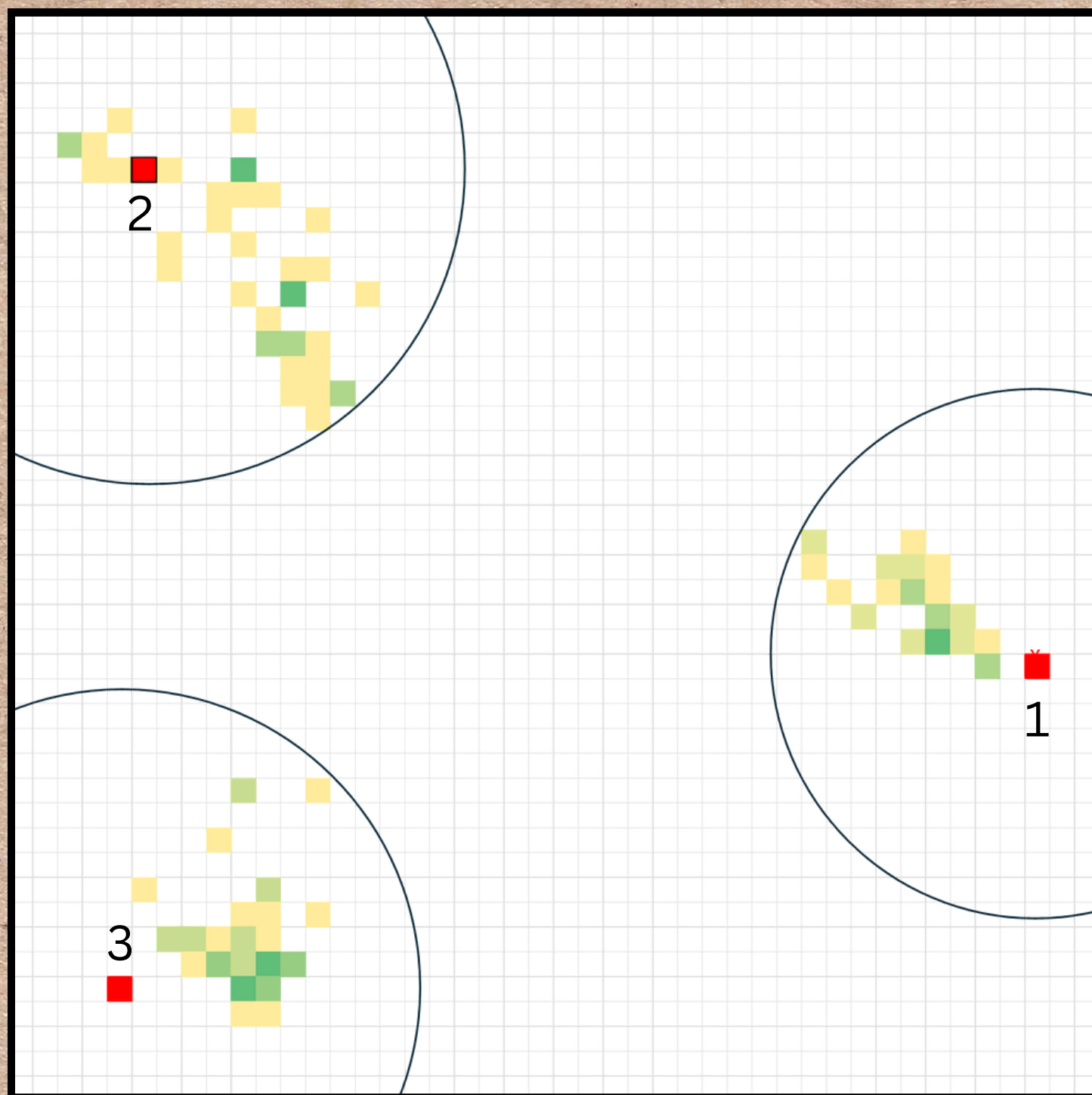
SVM



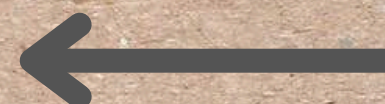
Test Phase

11

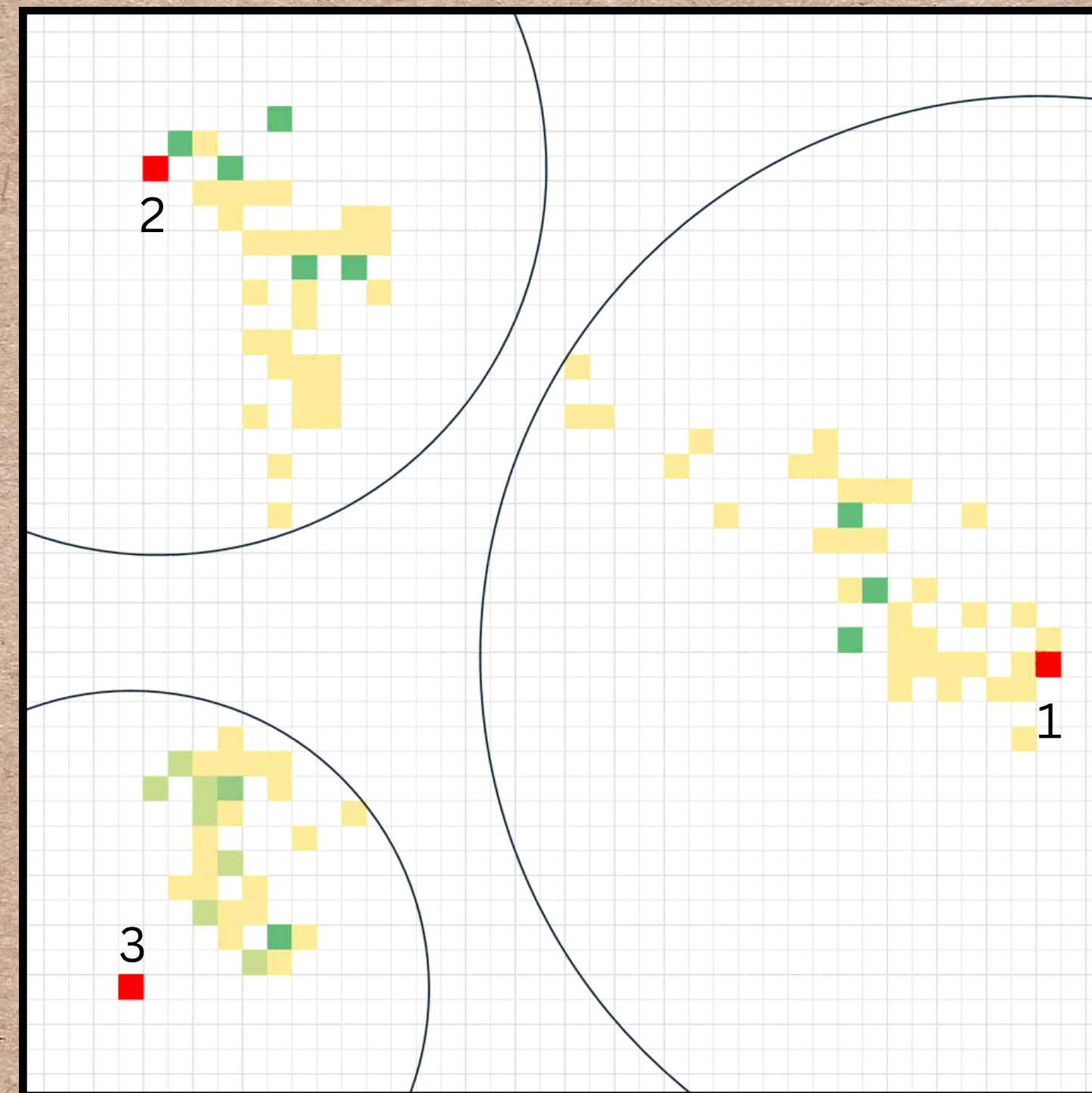
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WKNN



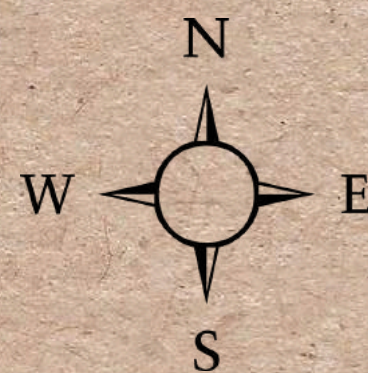
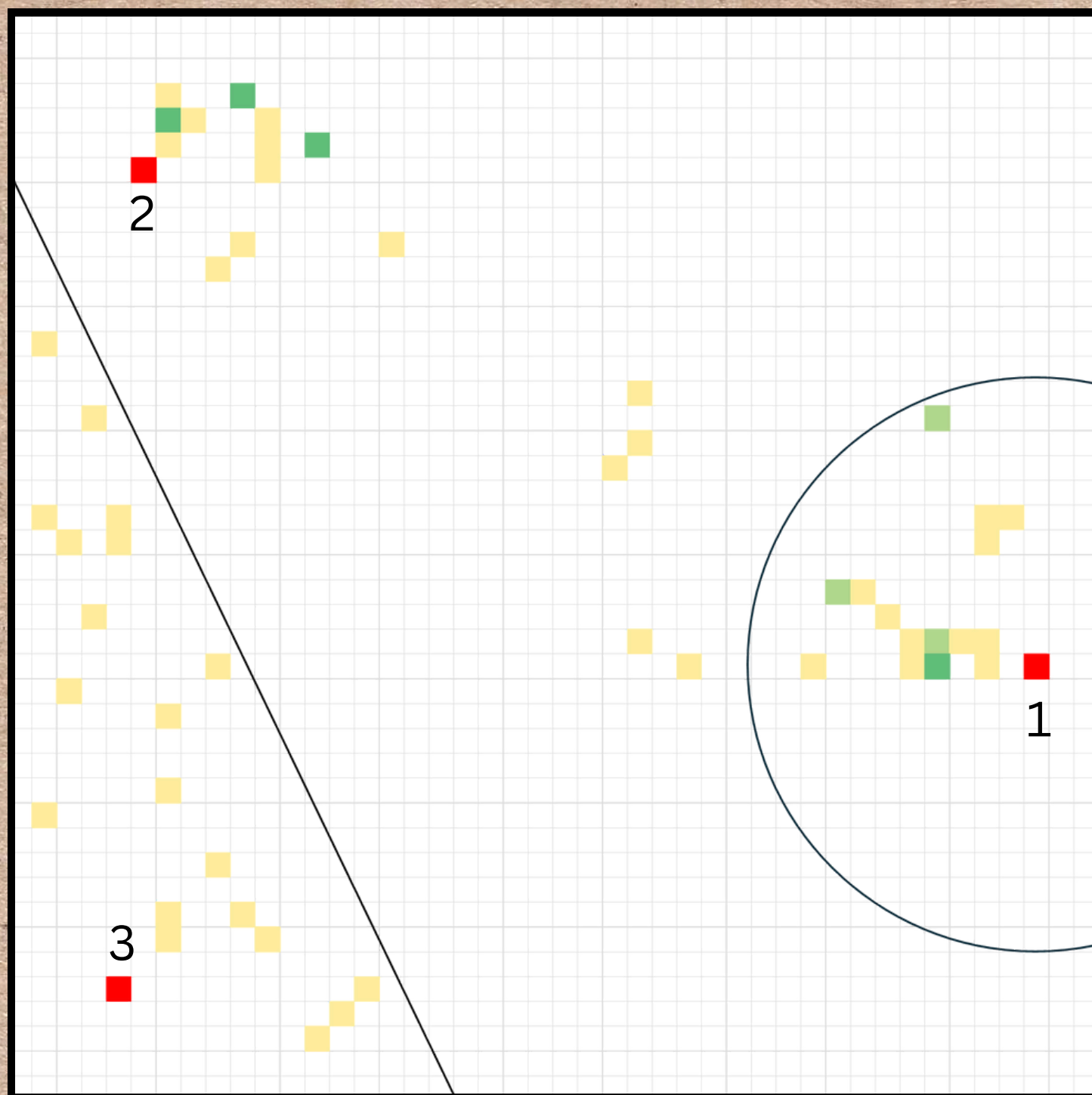
SVM



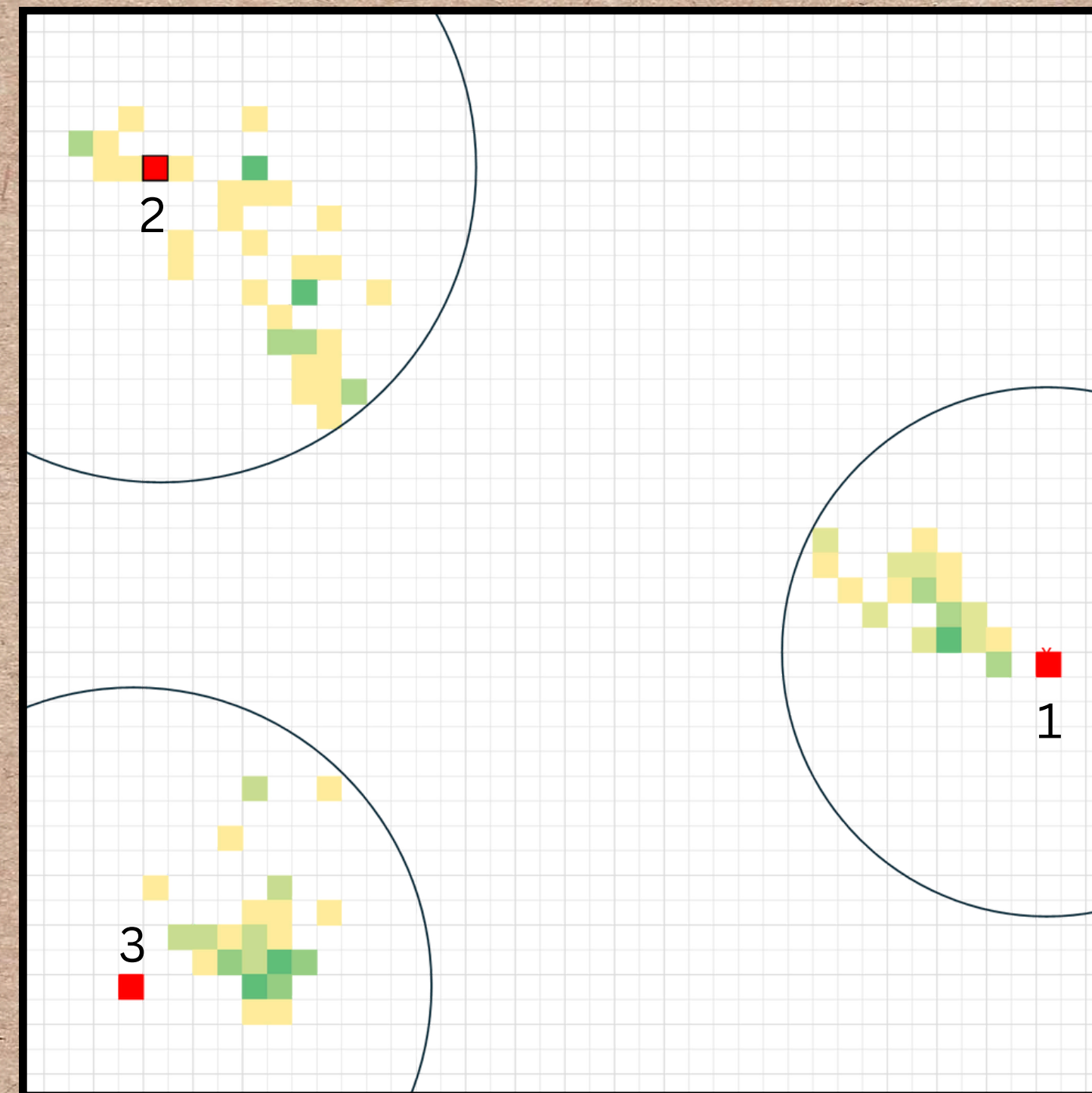
Test Phase

12

[Handwritten signature]



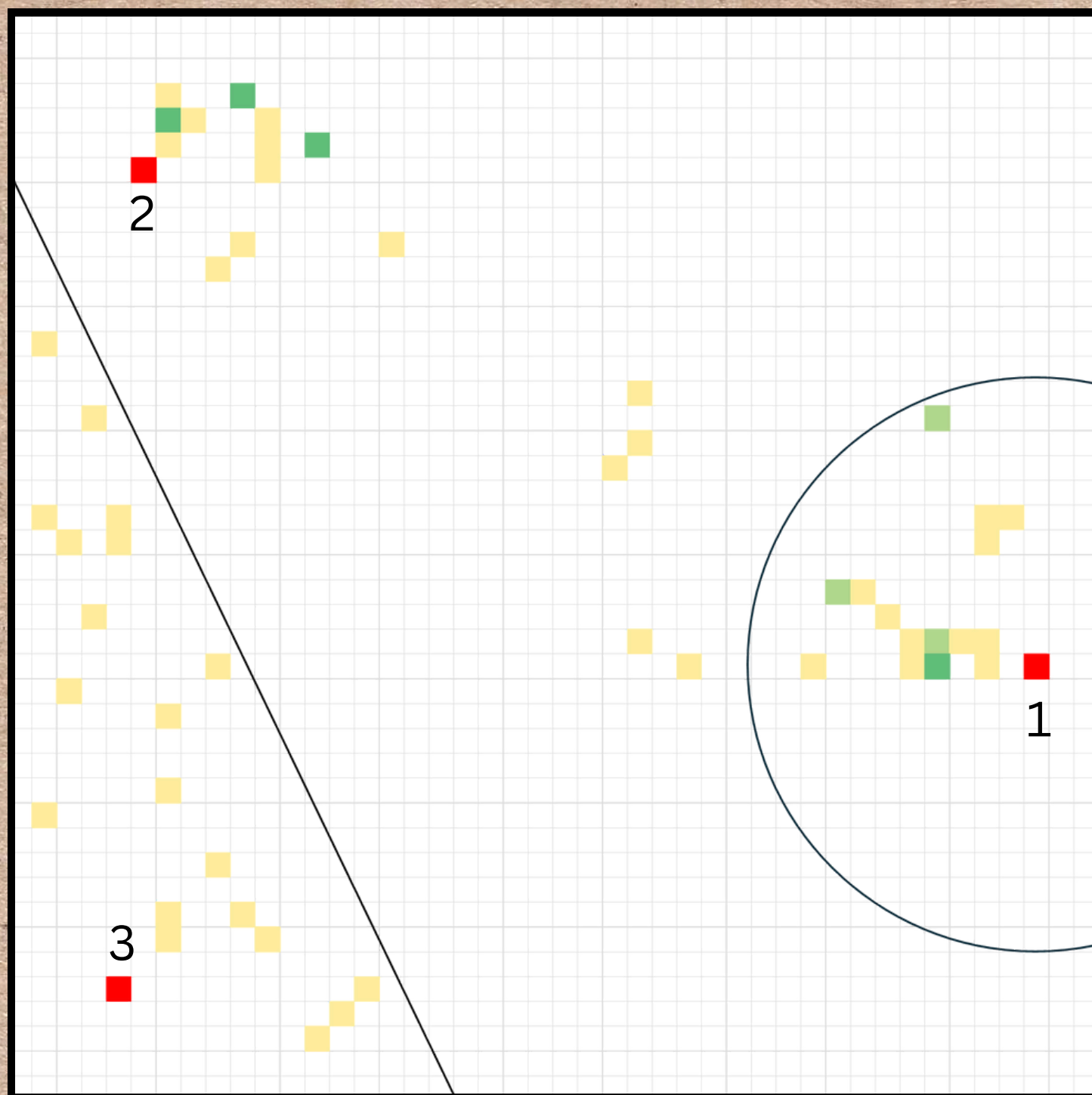
Old
←
New
WKNN
→



Test Phase

13

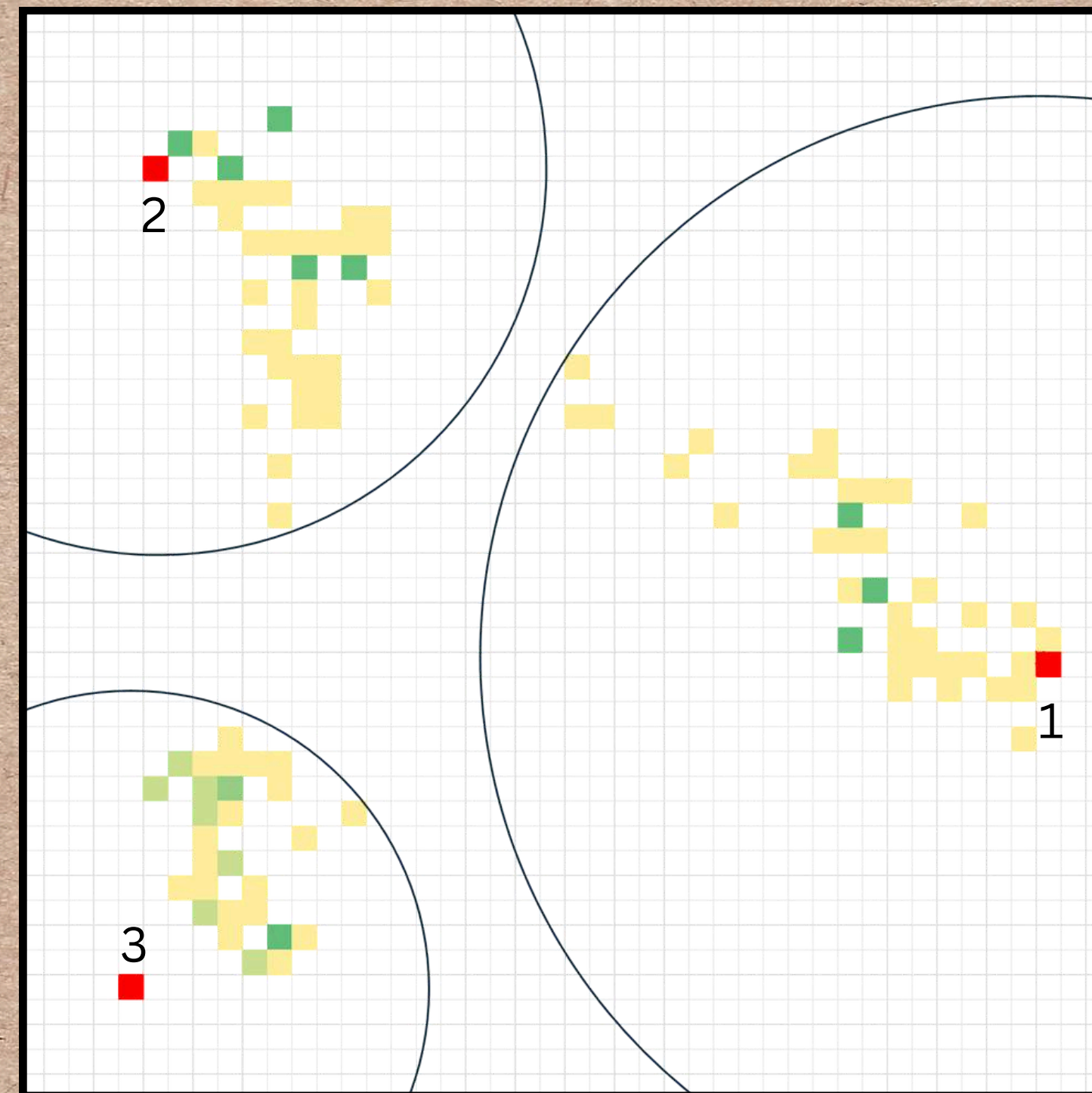
[Handwritten signature]



Old



New
SVM





**THANK
YOU**

