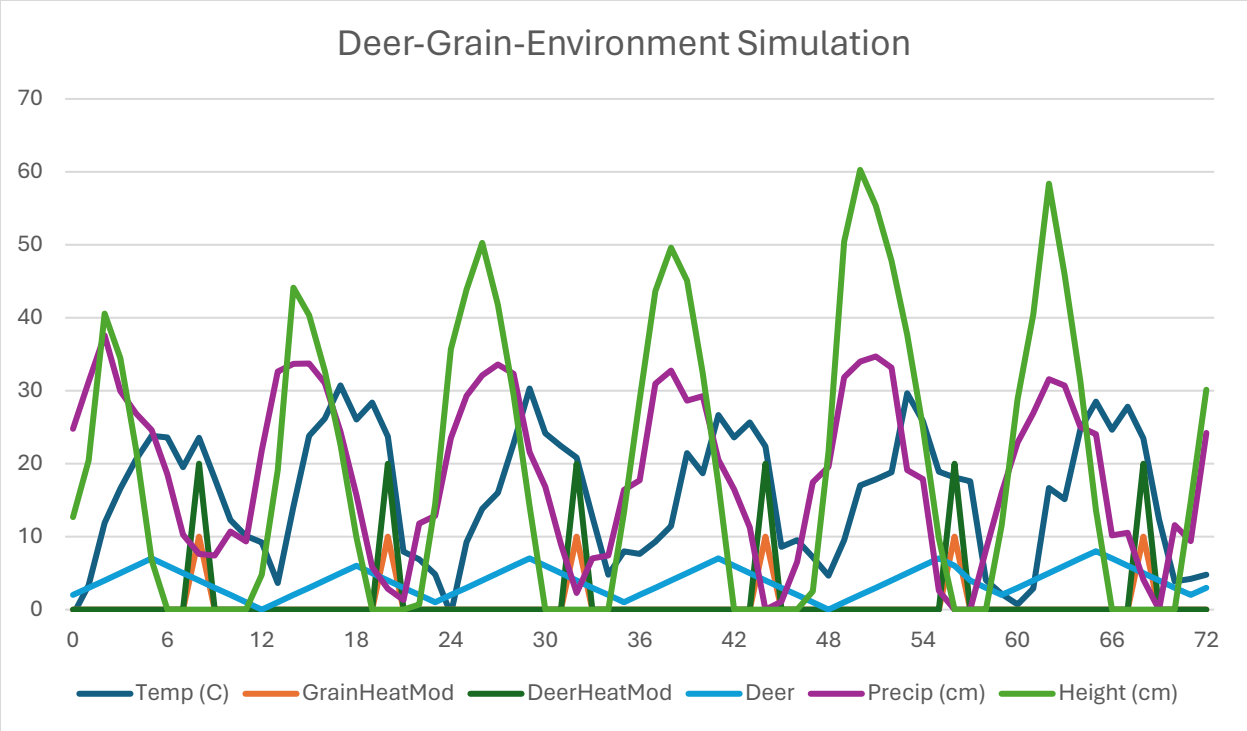
CS 475 – Parallel Programming

Jenny Zhong - zhongje@oregonstate.edu

Project #2 - Functional Decomposition

Month	Temp (C)	GrainHeatMod	DeerHeatMod	Deer	Precip (cm)	Height (cm)
0	-0.72727	0	0	2	24.767524	12.7
1	3.331269	0	0	3	31.23288	20.425311
2	11.878179	0	0	4	37.578355	40.581719
3	16.590375	0	0	5	29.970843	34.463759
4	20.562464	0	0	6	26.88412	22.011573
5	23.819618	0	0	7	24.623558	6.778288
6	23.607936	0	0	6	18.552687	0
7	19.537231	0	0	5	10.278107	0
8	23.570493	10	20	4	7.613894	0
9	17.996869	0	0	3	7.416745	0
10	12.28135	0	0	2	10.691925	0
11	10.081452	0	0	1	9.358309	0
12	9.199802	0	0	0	21.817215	4.76575
13	3.650712	0	0	1	32.65455	19.126509
14	14.115164	0	0	2	33.707216	44.111213
15	23.801617	0	0	3	33.733968	40.354296
16	26.169857	0	0	4	31.075669	32.734441
17	30.730938	0	0	5	24.402367	22.574448
18	26.062232	0	0	6	15.650023	9.874448
19	28.377287	0	0	5	5.826429	0
20	23.750992	10	20	4	2.859734	0
21	7.957564	0	0	3	1.326161	0
22	6.88591	0	0	2	11.789085	0.701859
23	4.834061	0	0	1	12.858513	14.477147
24	-0.617398	0	0	2	23.514965	35.705478
25	9.255333	0	0	3	29.322827	43.841132
26	13.826671	0	0	4	32.102437	50.281102
27	16.029773	0	0	5	33.598356	41.762243
28	22.767245	0	0	6	32.32512	29.417172
29	30.305591	0	0	7	21.595256	14.177708
30	24.190809	0	0	6	16.828328	0
31	22.394023	0	0	5	8.970418	0
32	20.823712	10	20	4	2.261592	0
33	12.758001	0	0	3	7.004866	0
34	4.784643	0	0	2	7.42595	0
35	7.969384	0	0	1	16.415404	13.323976
36	7.648816	0	0	2	17.721148	28.766018

37	9.287754	0	0	3	30.952258	43.63129
38	11.466548	0	0	4	32.776791	49.600286
39	21.460525	0	0	5	28.637426	45.109679
40	18.678563	0	0	6	29.255421	32.412208
41	26.66158	0	0	7	20.517754	17.214189
42	23.577923	0	0	6	16.474573	0
43	25.669619	0	0	5	11.267303	0
44	22.369486	10	20	4	0	0
45	8.599266	0	0	3	1.09897	0
46	9.536482	0	0	2	6.539939	0
47	7.20622	0	0	1	17.480689	2.500937
48	4.666602	0	0	0	19.554817	21.561809
49	9.523919	0	0	1	31.852133	50.423468
50	17.029966	0	0	2	33.980993	60.269751
51	17.871704	0	0	3	34.702969	55.350313
52	18.797985	0	0	4	33.167503	47.807731
53	29.654435	0	0	5	19.132517	37.682758
54	25.828518	0	0	6	17.897025	24.982758
55	18.917944	0	0	7	2.600215	9.742768
56	18.12347	10	20	6	0	0
57	17.600695	0	0	4	0	0
58	4.041256	0	0	3	8.147762	0
59	2.165606	0	0	2	15.950228	11.494768
60	0.71309	0	0	3	22.918005	28.844819
61	2.888292	0	0	4	26.924311	40.453766
62	16.669744	0	0	5	31.602405	58.372406
63	15.138724	0	0	6	30.695263	45.898909
64	24.693705	0	0	7	25.030648	31.376467
65	28.529934	0	0	8	24.042876	13.596517
66	24.639176	0	0	7	10.183022	0
67	27.826623	0	0	6	10.520773	0
68	23.479292	10	20	5	4.13506	0
69	12.357146	0	0	4	0	0
70	3.880908	0	0	3	11.567106	0
71	4.197324	0	0	2	9.374451	14.805303
72	4.768598	0	0	3	24.233613	30.155684



- My quantity for this project is a heatwave that occurs in August and kills approximately 20% of the deer population for that month and destroys 10% of grains. On the above graph, GrainHeatMod stands for percentage of grains lost and DeerHeatMod stands for percentage of deer dead as a result of the heatwave.
- A dip in the deer population every August aligns with the decrease in grain height in the same month. A peak in the temperature and a decrease in the precipitation during the months when the grain height is low is accurate because it is lowest during August, the month of the heatwave.