CU Capstone (public)

	Program	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1	CU Capstone									CU Capstone
2	Project management		Project management							
3	Draft project charter		Draft project charter							
4	Finalize project charter (1 or 2 semesters)		Finalize project charter (1 or 2 semesters)							
5	9/27/2023 meeting to dos		9/27/2023 meeting to dos							
9	10/4/2023 meeting to dos									
10	When to have CU students visit Canopy HQ?									
11	Technical					Technical				
12	VM setup		VM setup							
13	Read through codebase, background literature, PMP library, etc.		Read through codebase, background literature, PMP library, etc.							
14	Finish wall thickness algorithm					Finish wall thickness algorithm				
15	Algorithm Implementation Work		Algorithm Implementation Work							
16	a) For a face, find intersecting AABBs (along the tree path)		a) For a face, find intersecting AABBs (along the tree path)							
17	b) Given a face a point C , find the point in the Face closest to point C		b) Given a face a point C , find the point in the Face closest to point C							
18	c) Implement recursion, using a) and b)		c) Implement recursion, using a) and b)							
19	d) Initial testing and verification		d) Initial testing and verification							
20										
21	Initial working example		Initial working example							
22	Clean up warnings		Clean up warnings							
23	Fix memory leak		Fix memory leak							
24	Clean up code base (ie better comments, naming conventions)		Clean up code base (ie better comments, naming conventions)							
25	Cmd line specifiable: input file, output file && format, flags (ie. debug_flag)		Cmd line specifiable: input file, output file && format, flags (ie. debug_flag)							
26	Create Unit Testing First Cases		Create Unit Testing First Cases							
27										
28	Implement visualization		Implement visualization							
29	Identify data storage format for analyzed 3D models		Identify data storage format for analyzed 3D models							
30	Demonstrate offline visualization		Demonstrate offline visualization							
31	Quantify baseline runtime for offline visualization		Quantify baseline runtime for offline visualization							
32	Develop slider feature to control color mapping		Develop slider feature to control color mapping							
33	Implement color picker		Implement color picker							
34	Incorporate visualization into a mocked website			Incorporate visualization into a mocked website						
35	Quantify baseline runtime for website visualization			Quantify baseline runtime for website visualization						
36										
37	Further Along Work		Further Along Work							
38	Implement parallelization (if using shrinking sphere method)		Implement parallelization (if using shrinking sphere method)							
39	Refactor the code base									
40	Find suitable algorithms for fillet radius and hole size									
41	Improve visualization speed									
42										
43	Midpoint review with Canopy team					Midpoint review with Canopy team				
44	Interim presentation			Interim presentation						
45	Discussion of tools with Canopy's technical team to realign priorities and timeline			Discussion of tools with Canopy's technical team to realign priorities and timeline						
46	Implement fillet radius algorithm - pending timeline from Fall semester			Implement fillet radius algorithm - pending timeline from Fall semester						
47	Implement hole size algorithm - pending timeline from Fall semester			Implement hole size algorithm - pending timeline from Fall semester						
48	Analyze DfAM algorithms runtime						Analyze DfAM algorithms runtime			
49	Generate relevant test STL files					Generate relevant test STL files				
50	Write analysis script for acquiring runtime data					Write analysis script for acquiring runtime data				
51	Review results with Canopy team and identify revisions					Review results with Canopy team and identify revisions				
52	Algorithm and visualization performance refinement						Algorithm and visualization performance refinement			
53	Finalize GUI and overall user experience						Finalize GUI and overall user experience			
54	Code cleanup and closeout						Code cleanup and closeout			
55										
56	Semester 2									Semester 2
57	Visualization and part_thickness code coupling									Visualization and part_thickness code coupling
58	Design and document architecture									
59	Decide on Architecture Plan: - Docker Container as executable? --> Outputs (.stl, .thickness, .log files). -- Container run locally? -- Container run on AWS (customer inputs the file somehow through visualization webpage)? - WASM? Turn code into WASM that can run in the browser along with visualization (exploration required).					Decide on Architecture Plan: - Docker Container as executable? --> Outputs (.stl, .thickness, .log files). -- Container run locally? -- Container run on AWS (customer inputs the file somehow through visualization webpage				
60	Secure required vendors (AWS GovCloud, etc.)									
61	Implement Architecture Plan									Implement Architecture Plan
62	Deploy visualization workflow MVP									
63	Visualization website features									Visualization website features
64	Establish feature to allow user to upload files (current approach is changing app.js codefile)									
65	Hover over face with cursor and see the thickness for that face?									Hover over face with cursor and see the thickness for that face?
66	Implement hole size algorithm.									Implement hole size algorithm.
67	Decide on paper.					Decide on paper.				
68	Document algorithm architecture					Document algorithm architecture				Document algorithm architecture
69	Establish hole sizing algorithm MVP									
70										
71	Final review with Canopy team									Final review with Canopy team
72	Final presentation									Final presentation
73	Final report									Final report
74	Feedback									Feedback
75	Pizza party									Pizza party