Endpoint	Sample request	Sample response (200 OK)	Sample response (400+ not OK)	Notes
/rover	POST {"diagnostics": {"battery":100,"CPU":10,"connection":100}, "MAC":1234567, "nickname":"MiWhip", "timestamp":10000, "position":[0,0], "whereat":1, "orientation":90, "branches":[20, 170, 310], "beaconangles":[100,300,250], "tofleft":10, "tofright":10, "battery":100}	{"next_actions":["step 100", "spin", "angle 20", "idle", "update position 250 250"]} All possible actions are given in sample, realistically only 1 or 2 given at a time	{"error":"Incorrectly formatted request: missing MAC"}	ESP to server communication only. For whereat, 0 is passage, 1 is junction, 2 is dead end, 3 is exit. branches & beaconangles are array of identified angles. All angles in degrees from "north" clockwise. When a rover first connects, it is automatically paused, and must be manually started.

/client/allrovers	GET
	~
		{
		{"MAC":1234567,
		"nickname":"MiWhip",
		"connected":true, "sessionid":12},
		{"MAC":1111111,
		"nickname":"Lightning McQueen",
		"connected":false}
		}
			~	Returns list of all rovers. If a rover is connected, its sessionid will be given. If a rover is in the database but not connected, no sessionid will be given.

/client/replay	GET
	{"sessionid":23}
		{
		1000:[0, 0, 0, 90, 30, 30],
		2000:[100, 0, 0, 90, 35, 30],
		timestamp:[xpos, ypos, whereat, orientation, tofleft, tofright]
		}
			{"error":"Incorrectly formatted request: missing sessionid"} OR
			{"error":"Session does not exist"}
				Returns all information needed to make a replay on the client side

/client/sessions	GET
	~
		{
		23:[1234567, "MiWhip"],
		24:[1111111, "Lightning McQueen"],
		sessionid:[MAC, nickname]
		}
			~	Returns all session ids, corresponding MAC addresses and nicknames

/client/diagnostics	GET
	{"MAC":"1234567"}
		{
		"MAC":"1234567",
		"timestamp":10000,
		"battery":100,
		"CPU":10,
		"connection":100
		}
			{"error":"Incorrectly formatted request: missing/invalid MAC"}	Returns most recently logged diagnostic data for given MAC address

/client/pause	POST {"MAC":"1234567"}	{"success":"successfully paused rover"}	{"error":"Selected rover does not exist, or is not currently connected"} OR {"error":"Incorrectly formatted request: missing MAC"}	Stops a rover from continuing its way through the maze. Idempotent.
/client/play	POST {"MAC":"1234567"}	{"success":"successfully played rover"}	{"error":"Selected rover does not exist, or is not currently connected"} OR {"error":"Incorrectly formatted request: missing MAC"}	Allows a paused rover to continue making its way through the maze. Idempotent.
/client/sessionnickname	POST {"sessionid":23, "sessionNick":"wrpace"}	{"success":"successfully changed session nickname"}	{"error":"Incorrectly formatted request: missing sessionid or sessionNick"}	Changes session nickname.
/client/rovernickname	POST {"MAC":1234567, "nickname":"YourWhip"}	{"success":"successfully changed rover nickname"}	{"error":"Incorrectly formatted request: missing MAC or nickname"}	Changes rover nickname
/client/shortestpath	GET {"MAC":1234567, "start":[0,0]}	{[0,0]:0, [100,0]:[0,0], [100,100]:[100,0], [50,50]:[0,0]}	{"error":"Incorrectly formatted request: missing MAC or start"} OR {"error":"Incorrectly formatted request: invalid MAC address"}	Returns shortest path predecessor graph, ie key is current node, value is next node to travel to. Start node has value 0.