

Example plugins

To get started building, we are making available a set of simple plugins that cover different authentication schemas and use cases. From our simple no authentication todo list plugin to the more [powerful retrieval plugin](#), these examples provide a glimpse into what we hope to make possible with plugins.

During development, you can run the plugin [locally on your computer](#) or through a cloud development environment like [GitHub Codespaces](#), [Replit](#), or [CodeSandbox](#).

< Plugin quickstart

We created the plugin quickstart as a starting place for developers to get a plugin up and running in less than 5 minutes. If you have not run a plugin yet and want to get acquainted with the minimal steps required to run one, consider beginning with the [plugin quickstart repo](#).

Collapse

< Learn how to build a simple todo list plugin with no auth

To start, check out the [no authentication](#) page, then define an `ai-plugin.json` file with the following fields:

```
1  {
2    "schema_version": "v1",
3    "name_for_human": "TODO List (No Auth)",
4    "name_for_model": "todo",
5    "description_for_human": "Manage your TODO list. You can add
6    "description_for_model": "Plugin for managing a TODO list, y
```

```
7     "auth": {
8         "type": "none"
9     },
10    "api": {
11        "type": "openapi",
12        "url": "PLUGIN_HOSTNAME/openapi.yaml"
13    },
14    "logo_url": "PLUGIN_HOSTNAME/logo.png",
15    "contact_email": "support@example.com",
16    "legal_info_url": "https://example.com/legal"
17 }
```

Note the `PLUGIN_HOSTNAME` should be the actual hostname of your plugin server.

Next, we can define the API endpoints to create, delete, and fetch todo list items for a specific user.

```
1  import json
2
3  import quart
4  import quart_cors
5  from quart import request
6
7  # Note: Setting CORS to allow chat.openapi.com is only required
8  app = quart_cors.cors(quart.Quart(__name__), allow_origin="https
9
10 _TODOS = {}
11
12
13 @app.post("/todos/<string:username>")
14 async def add_todo(username):
15     request = await quart.request.get_json(force=True)
16     if username not in _TODOS:
17         _TODOS[username] = []
```

```
18     _TODOS[username].append(request["todo"])
19     return quart.Response(response='OK', status=200)
20
21
22 @app.get("/todos/<string:username>")
23 async def get_todos(username):
24     return quart.Response(response=json.dumps(_TODOS.get(username)))
25
26
27 @app.delete("/todos/<string:username>")
28 async def delete_todo(username):
29     request = await quart.request.get_json(force=True)
30     todo_idx = request["todo_idx"]
31     if 0 <= todo_idx < len(_TODOS[username]):
32         _TODOS[username].pop(todo_idx)
33     return quart.Response(response='OK', status=200)
34
35
36 @app.get("/logo.png")
37 async def plugin_logo():
38     filename = 'logo.png'
39     return await quart.send_file(filename, mimetype='image/png')
40
41
42 @app.get("/.well-known/ai-plugin.json")
43 async def plugin_manifest():
44     host = request.headers['Host']
45     with open("ai-plugin.json") as f:
46         text = f.read()
47         # This is a trick we do to populate the PLUGIN_HOSTNAME
48         text = text.replace("PLUGIN_HOSTNAME", f"https://{host}")
49     return quart.Response(text, mimetype="text/json")
50
51
52 @app.get("/openapi.yaml")
```

```

53 async def openapi_spec():
54     host = request.headers['Host']
55     with open("openapi.yaml") as f:
56         text = f.read()
57         # This is a trick we do to populate the PLUGIN_HOSTNAME
58         text = text.replace("PLUGIN_HOSTNAME", f"https://{host}")
59         return quart.Response(text, mimetype="text/yaml")
60
61
62 def main():
63     app.run(debug=True, host="0.0.0.0", port=5002)
64
65
66 if __name__ == "__main__":
67     main()

```

Last, we need to set up and define a OpenAPI specification to match the endpoints defined on our local or remote server. You do not need to expose the full functionality of your API via the specification and can instead choose to let ChatGPT have access to only certain functionality.

There are also many tools that will automatically turn your server definition code into an OpenAPI specification so you don't need to do it manually. In the case of the Python code above, the OpenAPI specification will look like:

```

1  openapi: 3.0.1
2  info:
3      title: TODO Plugin
4      description: A plugin that allows the user to create and man
5      version: "v1"
6  servers:
7      - url: PLUGIN_HOSTNAME
8  paths:
9      /todos/{username}:

```

```
10      get:
11          operationId: getTodos
12          summary: Get the list of todos
13          parameters:
14              - in: path
15                name: username
16                schema:
17                    type: string
18                    required: true
19                    description: The name of the user.
20          responses:
21              "200":
22                  description: OK
23                  content:
24                      application/json:
25                          schema:
26                              $ref: "#/components/schemas/getT
27      post:
28          operationId: addTodo
29          summary: Add a todo to the list
30          parameters:
31              - in: path
32                name: username
33                schema:
34                    type: string
35                    required: true
36                    description: The name of the user.
37          requestBody:
38              required: true
39              content:
40                  application/json:
41                      schema:
42                          $ref: "#/components/schemas/addTodoR
43          responses:
44              "200":
```

```
45         description: OK
46     delete:
47         operationId: deleteTodo
48         summary: Delete a todo from the list
49         parameters:
50             - in: path
51               name: username
52               schema:
53                 type: string
54                 required: true
55                 description: The name of the user.
56         requestBody:
57             required: true
58             content:
59                 application/json:
60                     schema:
61                         $ref: "#/components/schemas/deleteTo
62         responses:
63             "200":
64                 description: OK
65
66 components:
67     schemas:
68         getTodosResponse:
69             type: object
70             properties:
71                 todos:
72                     type: array
73                     items:
74                         type: string
75                     description: The list of todos.
76         addTodoRequest:
77             type: object
78             required:
79                 - todo
```

```
80         properties:
81             todo:
82                 type: string
83                 description: The todo to add to the list.
84                 required: true
85         deleteTodoRequest:
86             type: object
87             required:
88                 - todo_idx
89             properties:
90                 todo_idx:
91                     type: integer
92                     description: The index of the todo to delete
93                     required: true
```

Collapse

< Learn how to build a simple todo list plugin with service level auth

To start, check out the [service level authentication](#) page and then define an `ai-plugin.json` file with the following fields:

```
1  {
2      "schema_version": "v1",
3      "name_for_human": "TODO List (service auth)",
4      "name_for_model": "todo",
5      "description_for_human": "Manage your TODO list. You can add
6      "description_for_model": "Plugin for managing a TODO list, y
7      "auth": {
8          "type": "service_http",
9          "authorization_type": "bearer",
```

```

10         "verification_tokens": {
11             "openai": "Replace_this_string_with_the_verification
12         }
13     },
14     "api": {
15         "type": "openapi",
16         "url": "https://example.com/openapi.yaml"
17     },
18     "logo_url": "https://example.com/logo.png",
19     "contact_email": "support@example.com",
20     "legal_info_url": "https://example.com/legal"
21 }

```

Notice that the verification token is required for service level authentication plugins. The token is generated during the plugin installation process in the ChatGPT web UI after you set the service access token.

You will also need to update "Example.com" to the name of your remote server.

Next, we can define the API endpoints to create, delete, and fetch todo list items for a specific user. The endpoints also check that the user is authenticated.

```

1  import json
2
3  import quart
4  import quart_cors
5  from quart import request
6
7  app = quart_cors.cors(quart.Quart(__name__))
8
9  # This key can be anything, though you will likely want a random
10 _SERVICE_AUTH_KEY = "REPLACE_ME"
11 _TODOS = {}
12
13 def assert_auth_header(req):

```



```

14     assert req.headers.get(
15         "Authorization", None) == f"Bearer {_SERVICE_AUTH_KEY}"
16
17 @app.post("/todos/<string:username>")
18 async def add_todo(username):
19     assert_auth_header(quart.request)
20     request = await quart.request.get_json(force=True)
21     if username not in _TODOS:
22         _TODOS[username] = []
23     _TODOS[username].append(request["todo"])
24     return quart.Response(response='OK', status=200)
25
26 @app.get("/todos/<string:username>")
27 async def get_todos(username):
28     assert_auth_header(quart.request)
29     return quart.Response(response=json.dumps(_TODOS.get(username)
30
31 @app.delete("/todos/<string:username>")
32 async def delete_todo(username):
33     assert_auth_header(quart.request)
34     request = await quart.request.get_json(force=True)
35     todo_idx = request["todo_idx"]
36     if 0 <= todo_idx < len(_TODOS[username]):
37         _TODOS[username].pop(todo_idx)
38     return quart.Response(response='OK', status=200)
39
40 @app.get("/logo.png")
41 async def plugin_logo():
42     filename = 'logo.png'
43     return await quart.send_file(filename, mimetype='image/png')
44
45 @app.get("/.well-known/ai-plugin.json")
46 async def plugin_manifest():
47     host = request.headers['Host']
48     with open("ai-plugin.json") as f:

```

```

49         text = f.read()
50         return quart.Response(text, mimetype="text/json")
51
52 @app.get("/openapi.yaml")
53 async def openapi_spec():
54     host = request.headers['Host']
55     with open("openapi.yaml") as f:
56         text = f.read()
57         return quart.Response(text, mimetype="text/yaml")
58
59 def main():
60     app.run(debug=True, host="0.0.0.0", port=5002)
61
62 if __name__ == "__main__":
63     main()

```

Last, we need to set up and define a OpenAPI specification to match the endpoints defined on our remote server. In general, the OpenAPI specification would look the same regardless of the authentication method. Using an automatic OpenAPI generator will reduce the chance of errors when creating your OpenAPI specification.

```

1  openapi: 3.0.1
2  info:
3      title: TODO Plugin
4      description: A plugin that allows the user to create and man
5      version: "v1"
6  servers:
7      - url: https://example.com
8  paths:
9      /todos/{username}:
10         get:
11             operationId: getTodos
12             summary: Get the list of todos

```

```
13         parameters:
14             - in: path
15               name: username
16               schema:
17                   type: string
18                   required: true
19                   description: The name of the user.
20         responses:
21             "200":
22                 description: OK
23                 content:
24                     application/json:
25                         schema:
26                             $ref: "#/components/schemas/getT
27     post:
28         operationId: addTodo
29         summary: Add a todo to the list
30         parameters:
31             - in: path
32               name: username
33               schema:
34                   type: string
35                   required: true
36                   description: The name of the user.
37         requestBody:
38             required: true
39             content:
40                 application/json:
41                     schema:
42                         $ref: "#/components/schemas/addTodoR
43         responses:
44             "200":
45                 description: OK
46     delete:
47         operationId: deleteTodo
```

```
48         summary: Delete a todo from the list
49         parameters:
50             - in: path
51               name: username
52               schema:
53                 type: string
54                 required: true
55                 description: The name of the user.
56         requestBody:
57             required: true
58             content:
59                 application/json:
60                     schema:
61                         $ref: "#/components/schemas/deleteTo
62         responses:
63             "200":
64                 description: OK
65
66 components:
67     schemas:
68         getTodosResponse:
69             type: object
70             properties:
71                 todos:
72                     type: array
73                     items:
74                         type: string
75                     description: The list of todos.
76         addTodoRequest:
77             type: object
78             required:
79                 - todo
80             properties:
81                 todo:
82                     type: string
```

```
83         description: The todo to add to the list.
84         required: true
85     deleteTodoRequest:
86         type: object
87         required:
88             - todo_idx
89         properties:
90             todo_idx:
91                 type: integer
92                 description: The index of the todo to delete
93                 required: true
```

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< Learn how to build a simple sports stats plugin

This plugin is an example of a simple sports stats API. Please keep in mind our domain policy and usage policies when considering what to build.

To start, define an `ai-plugin.json` file with the following fields:

```
1  {
2      "schema_version": "v1",
3      "name_for_human": "Sport Stats",
4      "name_for_model": "sportStats",
5      "description_for_human": "Get current and historical stats f
6      "description_for_model": "Get current and historical stats f
7      "auth": {
8          "type": "none"
9      },
10     "api": {
11         "type": "openapi",
```

```

12         "url": "PLUGIN_HOSTNAME/openapi.yaml"
13     },
14     "logo_url": "PLUGIN_HOSTNAME/logo.png",
15     "contact_email": "support@example.com",
16     "legal_info_url": "https://example.com/legal"
17 }

```

Note the `PLUGIN_HOSTNAME` should be the actual hostname of your plugin server.

Next, we define a mock API for a simple sports service plugin.

```

1  import json
2  import requests
3  import urllib.parse
4
5  import quart
6  import quart_cors
7  from quart import request
8
9  # Note: Setting CORS to allow chat.openapi.com is only required
10 app = quart_cors.cors(quart.Quart(__name__), allow_origin="http
11 HOST_URL = "https://example.com"
12
13 @app.get("/players")
14 async def get_players():
15     query = request.args.get("query")
16     res = requests.get(
17         f"{HOST_URL}/api/v1/players?search={query}&page=0&per_p
18     body = res.json()
19     return quart.Response(response=json.dumps(body), status=200
20
21
22 @app.get("/teams")
23 async def get_teams():

```

```
24     res = requests.get(
25         "{HOST_URL}/api/v1/teams?page=0&per_page=100")
26     body = res.json()
27     return quart.Response(response=json.dumps(body), status=200)
28
29
30 @app.get("/games")
31 async def get_games():
32     query_params = [("page", "0")]
33     limit = request.args.get("limit")
34     query_params.append(("per_page", limit or "100"))
35     start_date = request.args.get("start_date")
36     if start_date:
37         query_params.append(("start_date", start_date))
38     end_date = request.args.get("end_date")
39
40     if end_date:
41         query_params.append(("end_date", end_date))
42     seasons = request.args.getlist("seasons")
43
44     for season in seasons:
45         query_params.append(("seasons[]", str(season)))
46     team_ids = request.args.getlist("team_ids")
47
48     for team_id in team_ids:
49         query_params.append(("team_ids[]", str(team_id)))
50
51     res = requests.get(
52         f"{HOST_URL}/api/v1/games?{urllib.parse.urlencode(query_params)}")
53     body = res.json()
54     return quart.Response(response=json.dumps(body), status=200)
55
56
57 @app.get("/stats")
58 async def get_stats():
```

```

59     query_params = [("page", "0")]
60     limit = request.args.get("limit")
61     query_params.append(("per_page", limit or "100"))
62     start_date = request.args.get("start_date")
63     if start_date:
64         query_params.append(("start_date", start_date))
65     end_date = request.args.get("end_date")
66
67     if end_date:
68         query_params.append(("end_date", end_date))
69     player_ids = request.args.getlist("player_ids")
70
71     for player_id in player_ids:
72         query_params.append(("player_ids[]", str(player_id)))
73     game_ids = request.args.getlist("game_ids")
74
75     for game_id in game_ids:
76         query_params.append(("game_ids[]", str(game_id)))
77     res = requests.get(
78         f"{HOST_URL}/api/v1/stats?{urllib.parse.urlencode(query
79     body = res.json()
80     return quart.Response(response=json.dumps(body), status=200
81
82
83 @app.get("/season_averages")
84 async def get_season_averages():
85     query_params = []
86     season = request.args.get("season")
87     if season:
88         query_params.append(("season", str(season)))
89     player_ids = request.args.getlist("player_ids")
90
91     for player_id in player_ids:
92         query_params.append(("player_ids[]", str(player_id)))
93     res = requests.get(

```



```

94         f"{HOST_URL}/api/v1/season_averages?{urllib.parse.urlen
95     body = res.json()
96     return quart.Response(response=json.dumps(body), status=200
97
98
99     @app.get("/logo.png")
100     async def plugin_logo():
101         filename = 'logo.png'
102         return await quart.send_file(filename, mimetype='image/png'
103
104
105     @app.get("/.well-known/ai-plugin.json")
106     async def plugin_manifest():
107         host = request.headers['Host']
108         with open("ai-plugin.json") as f:
109             text = f.read()
110             # This is a trick we do to populate the PLUGIN_HOSTNAME
111             text = text.replace("PLUGIN_HOSTNAME", f"https://{host}
112             return quart.Response(text, mimetype="text/json")
113
114
115     @app.get("/openapi.yaml")
116     async def openapi_spec():
117         host = request.headers['Host']
118         with open("openapi.yaml") as f:
119             text = f.read()
120             # This is a trick we do to populate the PLUGIN_HOSTNAME
121             text = text.replace("PLUGIN_HOSTNAME", f"https://{host}
122             return quart.Response(text, mimetype="text/yaml")
123
124
125     def main():
126         app.run(debug=True, host="0.0.0.0", port=5001)
127
128

```

```
129 if __name__ == "__main__":
130     main()
```

Last, we define our OpenAPI specification:

```

1  openapi: 3.0.1
2  info:
3    title: Sport Stats
4    description: Get current and historical stats for sport pla
5    version: "v1"
6  servers:
7    - url: PLUGIN_HOSTNAME
8  paths:
9    /players:
10      get:
11        operationId: getPlayers
12        summary: Retrieves all players from all seasons who
13        parameters:
14          - in: query
15            name: query
16            schema:
17              type: string
18              description: Used to filter players based on
19        responses:
20          "200":
21            description: OK
22    /teams:
23      get:
24        operationId: getTeams
25        summary: Retrieves all teams for the current season
26        responses:
27          "200":
28            description: OK
29    /games:

```

```
30         get:
31             operationId: getGames
32             summary: Retrieves all games that match the filters
33             parameters:
34                 - in: query
35                   name: limit
36                   schema:
37                       type: string
38                   description: The max number of results to ret
39                 - in: query
40                   name: seasons
41                   schema:
42                       type: array
43                       items:
44                           type: string
45                   description: Filter by seasons. Seasons are r
46                 - in: query
47                   name: team_ids
48                   schema:
49                       type: array
50                       items:
51                           type: string
52                   description: Filter by team ids. Team ids can
53                 - in: query
54                   name: start_date
55                   schema:
56                       type: string
57                   description: A single date in 'YYYY-MM-DD' fo
58                 - in: query
59                   name: end_date
60                   schema:
61                       type: string
62                   description: A single date in 'YYYY-MM-DD' fo
63             responses:
64                 "200":
```

```
65         description: OK
66     /stats:
67         get:
68             operationId: getStats
69             summary: Retrieves stats that match the filters spe
70             parameters:
71                 - in: query
72                   name: limit
73                   schema:
74                       type: string
75                       description: The max number of results to ret
76                 - in: query
77                   name: player_ids
78                   schema:
79                       type: array
80                       items:
81                           type: string
82                       description: Filter by player ids. Player ids
83                 - in: query
84                   name: game_ids
85                   schema:
86                       type: array
87                       items:
88                           type: string
89                       description: Filter by game ids. Game ids can
90                 - in: query
91                   name: start_date
92                   schema:
93                       type: string
94                       description: A single date in 'YYYY-MM-DD' fo
95                 - in: query
96                   name: end_date
97                   schema:
98                       type: string
99                   description: A single date in 'YYYY-MM-DD' fo
```

```

100         responses:
101             "200":
102                 description: OK
103     /season_averages:
104         get:
105             operationId: getSeasonAverages
106             summary: Retrieves regular season averages for the
107             parameters:
108                 - in: query
109                   name: season
110                   schema:
111                       type: string
112                       description: Defaults to the current season.
113                 - in: query
114                   name: player_ids
115                   schema:
116                       type: array
117                       items:
118                           type: string
119                       description: Filter by player ids. Player ids
120             responses:
121                 "200":
122                     description: OK

```

Collapse

< Learn how to build a simple OAuth todo list plugin

To create an OAuth plugin, we start by defining a `ai-plugin.json` file with the auth type set to `oauth`:

```
1 {
```



```

2     "schema_version": "v1",
3     "name_for_human": "TODO List (OAuth)",
4     "name_for_model": "todo_oauth",
5     "description_for_human": "Manage your TODO list. You can add
6     "description_for_model": "Plugin for managing a TODO list, y
7     "auth": {
8         "type": "oauth",
9         "client_url": "PLUGIN_HOSTNAME/oauth",
10        "scope": "",
11        "authorization_url": "PLUGIN_HOSTNAME/auth/oauth_exchang
12        "authorization_content_type": "application/json",
13        "verification_tokens": {
14            "openai": "Replace_this_string_with_the_verification
15        }
16    },
17    "api": {
18        "type": "openapi",
19        "url": "PLUGIN_HOSTNAME/openapi.yaml"
20    },
21    "logo_url": "PLUGIN_HOSTNAME/logo.png",
22    "contact_email": "contact@example.com",
23    "legal_info_url": "http://www.example.com/legal"
24 }

```

Next, we need to define our OAuth service. This OAuth example is not intended for production use cases but rather to highlight what a simple OAuth flow will look like so developers can get experience building towards a production solution.

```

1  import json
2
3  import quart
4  import quart_cors
5  from quart import request
6

```

```
7  app = quart_cors.cors(quart.Quart(__name__), allow_origin="*")
8
9  _TODOS = {}
10
11 @app.post("/todos/<string:username>")
12 async def add_todo(username):
13     request = await quart.request.get_json(force=True)
14     if username not in _TODOS:
15         _TODOS[username] = []
16     _TODOS[username].append(request["todo"])
17     return quart.Response(response='OK', status=200)
18
19 @app.get("/todos/<string:username>")
20 async def get_todos(username):
21     print(request.headers)
22     return quart.Response(response=json.dumps(_TODOS.get(username)))
23
24 @app.delete("/todos/<string:username>")
25 async def delete_todo(username):
26     request = await quart.request.get_json(force=True)
27     todo_idx = request["todo_idx"]
28     # fail silently, it's a simple plugin
29     if 0 <= todo_idx < len(_TODOS[username]):
30         _TODOS[username].pop(todo_idx)
31     return quart.Response(response='OK', status=200)
32
33 @app.get("/logo.png")
34 async def plugin_logo():
35     filename = 'logo.png'
36     return await quart.send_file(filename, mimetype='image/png')
37
38 @app.get("/.well-known/ai-plugin.json")
39 async def plugin_manifest():
40     host = request.headers['Host']
41     with open("manifest.json") as f:
```

```

42     text = f.read()
43     text = text.replace("PLUGIN_HOSTNAME", f"https://{host}")
44     return quart.Response(text, mimetype="text/json")
45
46 @app.get("/openapi.yaml")
47 async def openapi_spec():
48     host = request.headers['Host']
49     with open("openapi.yaml") as f:
50         text = f.read()
51         text = text.replace("PLUGIN_HOSTNAME", f"https://{host}")
52         return quart.Response(text, mimetype="text/yaml")
53
54 @app.get("/oauth")
55 async def oauth():
56     query_string = request.query_string.decode('utf-8')
57     parts = query_string.split('&')
58     kvps = {}
59     for part in parts:
60         k, v = part.split('=')
61         v = v.replace("%2F", "/").replace("%3A", ":")
62         kvps[k] = v
63     print("OAuth key value pairs from the ChatGPT Request: ", kvps)
64     url = kvps["redirect_uri"] + f"?code={OPENAI_CODE}"
65     print("URL: ", url)
66     return quart.Response(
67         f'<a href="{url}">Click to authorize</a>'
68     )
69
70 # Sample names
71 OPENAI_CLIENT_ID = "id"
72 OPENAI_CLIENT_SECRET = "secret"
73 OPENAI_CODE = "abc123"
74 OPENAI_TOKEN = "def456"
75
76 @app.post("/auth/oauth_exchange")

```



```

77 async def oauth_exchange():
78     request = await quart.request.get_json(force=True)
79     print(f"oauth_exchange {request}")
80
81     if request["client_id"] != OPENAI_CLIENT_ID:
82         raise RuntimeError("bad client ID")
83     if request["client_secret"] != OPENAI_CLIENT_SECRET:
84         raise RuntimeError("bad client secret")
85     if request["code"] != OPENAI_CODE:
86         raise RuntimeError("bad code")
87
88     return {
89         "access_token": OPENAI_TOKEN,
90         "token_type": "bearer"
91     }
92
93 def main():
94     app.run(debug=True, host="0.0.0.0", port=5002)
95
96 if __name__ == "__main__":
97     main()

```

Last, like with our other examples, we define a simple OpenAPI file based on the endpoints:

```

1  openapi: 3.0.1
2  info:
3      title: TODO Plugin
4      description: A plugin that allows the user to create and man
5      version: "v1"
6  servers:
7      - url: PLUGIN_HOSTNAME
8  paths:
9      /todos/{username}:

```

```
10         get:
11             operationId: getTodos
12             summary: Get the list of todos
13             parameters:
14                 - in: path
15                   name: username
16                   schema:
17                       type: string
18                       required: true
19                       description: The name of the user.
20             responses:
21                 "200":
22                     description: OK
23                     content:
24                         application/json:
25                             schema:
26                                 $ref: "#/components/schemas/getT
27         post:
28             operationId: addTodo
29             summary: Add a todo to the list
30             parameters:
31                 - in: path
32                   name: username
33                   schema:
34                       type: string
35                       required: true
36                       description: The name of the user.
37             requestBody:
38                 required: true
39                 content:
40                     application/json:
41                         schema:
42                             $ref: "#/components/schemas/addTodoR
43             responses:
44                 "200":
```

```
45         description: OK
46     delete:
47         operationId: deleteTodo
48         summary: Delete a todo from the list
49         parameters:
50             - in: path
51               name: username
52               schema:
53                 type: string
54                 required: true
55                 description: The name of the user.
56         requestBody:
57             required: true
58             content:
59                 application/json:
60                     schema:
61                         $ref: "#/components/schemas/deleteTo
62         responses:
63             "200":
64                 description: OK
65
66 components:
67     schemas:
68         getTodosResponse:
69             type: object
70             properties:
71                 todos:
72                     type: array
73                     items:
74                         type: string
75                     description: The list of todos.
76         addTodoRequest:
77             type: object
78             required:
79                 - todo
```

```
80         properties:
81             todo:
82                 type: string
83                 description: The todo to add to the list.
84                 required: true
85     deleteTodoRequest:
86         type: object
87         required:
88             - todo_idx
89         properties:
90             todo_idx:
91                 type: integer
92                 description: The index of the todo to delete
93                 required: true
```

Collapse

< Learn how to build a semantic search and retrieval plugin

The [ChatGPT retrieval plugin](#) is a more fully featured code example. The scope of the plugin is large, so we encourage you to read through the code to see what a more advanced plugin looks like.

The retrieval plugin includes:

- Support for multiple vector databases providers
- All 4 different authentication methods
- Multiple different API features

Collapse
