API Specification

HOMEPAGE ROUTES

Route 1: **/timeseries_funding**

Description: Returns total funding by year filtered by market

Route Parameter(s): **None**

Query Parameter(s): **market** (string)

Route Handler: **timeseries_funding(req, res)**

Return Type: JSON

Return Parameters: {results (JSON array of {year (int), total_funding (int) })}

Expected (Output) Behavior: returns total funding by year, filtered by industry. If no market specified, returns total funding by year for all markets.

Route 2: **/timeseries_count_funding**

Description: Returns count of distinct funded companies by year filtered by market

Route Parameter(s): **None**

Query Parameter(s): **market** (string)

Route Handler: **timeseries_funding(req, res)**

Return Type: JSON

Return Parameters: {results (JSON array of {year (int), count_companies (int) })}

Expected (Output) Behavior: returns count of funded companies by year, filtered by industry. If no market specified, returns total count by year for all markets.

Route 3: **/timeseries_founding_dates**

Description: Returns count of startups founded by year, filtered by market

Route Parameter(s): **None**

Query Parameter(s): **market** (string)

Route Handler: **timeseries_funding(req, res)**

Return Type: JSON

Return Parameters: {results (JSON array of {year (int), count_companies (int) })}

Expected (Output) Behavior: returns count of founded companies by year, filtered by market. If no market specified, returns count of founded companies by year for all markets.

Route 4: **/market_funding_share**

Description: Returns proportion of funds allocated to each market, filtered by year if specified.

Route Parameter(s): **None**

Query Parameter(s): **year** (int)

Route Handler: **timeseries_funding(req, res)**

Return Type: JSON

Return Parameters: {results (JSON array of {market(str), proportion_funding (float) })}

Expected (Output) Behavior: returns the proportion of funding allocated to each market, filtered by year if specified.

Route 5: **/international_funding**

Description: Returns proportion of international funding as a function of round_type. May be filtered by year and/or market.

Route Parameter(s): **None**

Query Parameter(s): **year** (int), **market** (str)

Route Handler: **timeseries_funding(req, res)**

Return Type: JSON

Return Parameters: {results (JSON array of {round_type (str), proportion_international (float) })}

Expected (Output) Behavior: returns all round_types and their corresponding proportions of international funding. Values sorted in ascending order by proportion_international.

DASHBOARD ROUTES

Route 6:: /populate_us_heatmap

Description: Returns an array of state KPI values: the number of companies founded by state, the total funding by state, or the total net funding by state. May be filtered by year or by market.

Route Parameter(s): **kpi** (str)

Query Parameter(s): **year** (int), **market** (str)

Route Handler: **timeseries_funding(req, res)**

Return Type: JSON

Return Parameters: {results (JSON array of {state (str), value (float) })}

Expected (Output) Behavior: returns all states and their corresponding values as a JSON array

      Case 1: kpi == "Count of Founded Companies": Returns the count of founded companies by state and filtered by market/year as specified in the value column.

      Case 2: kpi == "Total Funding": Returns the total company funding by state and filtered by market/year as specified in the value column.

      Case 3: kpi == "Net Funding": Returns the net company funding by state and filtered by market/year as specified in the value column.

COMPANY ROUTES

Route 7: /search/companies

Description: Returns an array of selected attributes for companies that match the search query

Route Parameter(s): **None**

Query Parameter(s): **name** (string)*, **market** (string)*, **country** (string)*, **state** (string)*, **total_fundingLow** (double)*, **total_fundingHigh** (double)*, **num_acquisitionsLow** (int)*, **num_acquisitionsHigh** (int)*, **page** (int)*, **pagesize** (int)* (default: 10)

Route Handler: **search_companies(req, res)**

Return Type: JSON

Return Parameters: {results (JSON array of {**id** (int), **name** (string), **market** (string), **country** (string), **state** (string), **founding_date** (date), **homepage_url** (int), **total_funding** (double), **num_acquisitions** (int)})}

Expected (Output) Behavior:

-   Return an array with all companies that match the constraints. If no company satisfies the constraints, return an empty array as 'results' without causing an error
-   The expected match behavior for string-matching is the same as that of the LIKE function in MySQL
-   xHigh and xLow are the upper and lower bound filters for an attribute x. Entries that match the ends of the bounds should be included in the match
-   If the page parameter is defined, return parameters for that page number considering page size. Else, return all parameters
-   Alphabetically sort the results by name attribute

Route 8: /company

Description: Returns information about a company specified by id

Route Parameter(s): **None**

Query Parameter(s): **id** (int)

Route Handler: **company(req, res)**

Return Type: JSON

Return Parameters (required): {results (JSON array of {**id** (int), **name** (string), **homepage_url** (int), **total_funding** (double)})}

Expected (Output) Behavior:

-   If the id is found return the singleton array of all the attributes available, but if the ID is a number but is not found, return an empty array as 'results' without causing an error
-   Additional return parameters will vary depending on existence of investment round or acquisition:
    -   If the company has had an investment round, also return {**round_number** (int), **round_type** (string), **amount_USD** (double), **investor_id** (int), **investor_name** (string)}
    -   If the company has been acquired, also return {**acquirer_id** (int), **acquirer_name** (string)}

INVESTOR ROUTES

Route 9: /search/investors

Description: Returns an array of selected attributes for investors that match the search query

Route Parameter(s): **None**

Query Parameter(s): **name** (string)*, **market** (string)*, **country** (string)*, **state** (string)*, **is_person** (string), **num_investmentsLow** (double)*, **num_investmentsHigh** (double)*, **num_acquisitionsLow** (int)*, **num_acquisitionsHigh** (int)*, **page** (int)*, **pagesize** (int)* (default: 10)

Route Handler: **search_investors(req, res)**

Return Type: JSON

Return Parameters: {results (JSON array of {**id** (int), **name** (string), **market** (string), **country** (string), **state** (string), **num_investments** (int), **num_acquisitions** (int)})}

Expected (Output) Behavior:

-   Return an array with all investors/acquirers that match the constraints. If no investor/acquirer satisfies the constraints, return an empty array as 'results' without causing an error
-   The expected match behavior for string-matching is the same as that of the LIKE function in MySQL
-   xHigh and xLow are the upper and lower bound filters for an attribute x. Entries that match the ends of the bounds should be included in the match
-   If the page parameter is defined, return parameters for that page number considering page size. Else, return all parameters
-   Alphabetically sort the results by name attribute

Route 10: /investor

Description: Returns information about an investor (or acquirer) specified by id

Route Parameter(s): **None**

Query Parameter(s): **id** (int)

Route Handler: **investor(req, res)**

Return Type: JSON

Return Parameters: {results (JSON array of {**id** (int), **name** (string), array of {**invested_copmanies** (string)}, array of {**co_investors** (string)}, array of {**market** (string), **num_investments** (int)}})}

Expected (Output) Behavior:

-   If the id is found return the singleton array of all the attributes available, but if the ID is a number but is not found, return an empty array as 'results' without causing an error