



kokchun giang

a short background
into what a **database**
is and different types
of databases

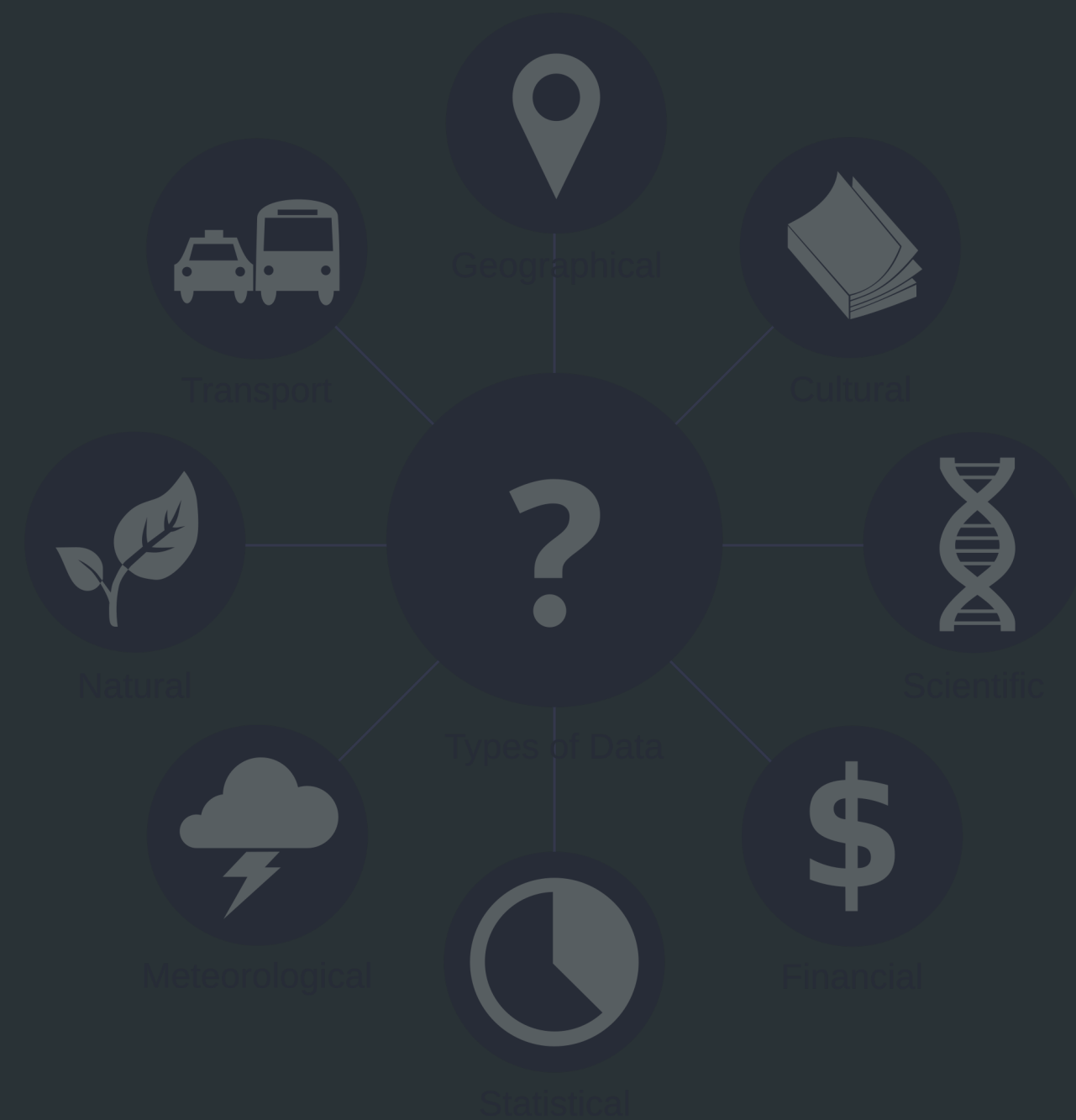
before going to database, we need to know what **data** is



"data are a collection of discrete or continuous values that convey information, describing the quantity, quality, fact, statistics, other basic units of meaning, or simply sequences of symbols that may be further interpreted formally."

from wikipedia

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from wikipedia

data can be **categorized** based on structure

structured data

organized in
defined schema



relational
database tables



spreadsheet,
csv, excel

semi-structured data

partially organized data
that doesn't fit in
relational tables

```
[
  {
    "id": 1,
    "name": "Alice Rickardsson",
    "age": 22,
    "gender": "Female",
    "email": "alice.rick@example.com",
    "courses": [
      {
        "course_id": "PY24",
        "course_name": "Python fundamentals",
        "grade": "G"
      },
      {
        "course_id": "SQL24",
        "course_name": "SQL",
        "grade": "VG"
      }
    ],
    "enrollment_date": "2023-09-01"
  },
  { "id": 2, "name": "Berit Beritsson", ... }
]
```

json data

unstructured data

lacks predefined
structure making
difficult to process



image



audio



video



pdfs,
documents

