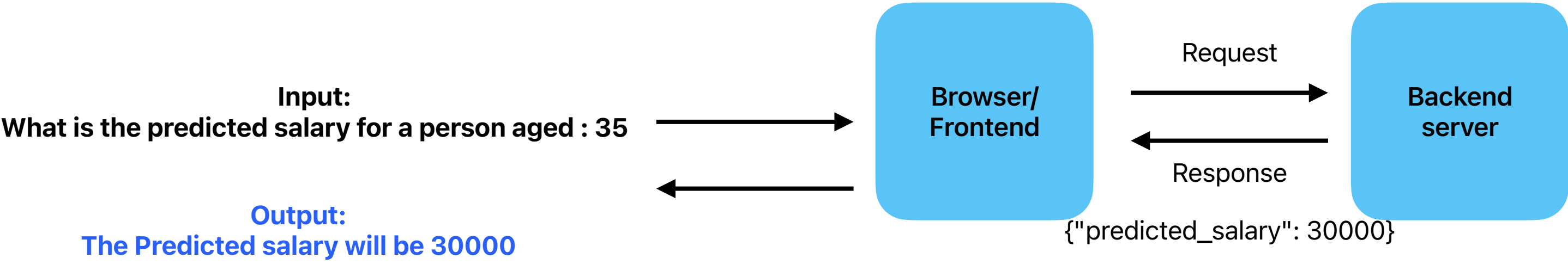# FastAPI

- Starlette for ASGI (async web server interface)
- Pydantic for Data Validation and Parsing

- It is as fast as Node.js and GO for serving APIs
- It uses Python type hints to give autocompletion and data validation
- It automatically generates the Interactive swagger documentation (no extra work)

# What is API ?

API Stands for Application Programming Interface

It is a set of rules and protocols that allow two software applications to talk to each other

**Input:**
**What is the predicted salary for a person aged : 35**

**Output:**
**The Predicted salary will be 30000**

| Browser/Frontend | Request → ← Response | Backend server |

{"predicted_salary": 30000}

# What is RESTAPI ?

Type of API, uses HTTP methods like GET, POST, PUT, DELETE, etc

| HTTP METHODS | PURPOSE |
|---|---|
| **GET** | RETRIEVE DATA |
| **POST** | SUBMIT NEW DATA |
| **PUT** | UPDATE DATA |
| **DELETE** | REMOVE DATA |

# API COMPONENTS

| | |
|---|---|
| **Endpoint** | A specific URL path(eg: /predict) |
| **Method** | http method used |
| **Request Body** | Data sent to API (json) |
| **Response** | Data returned by the API (json) |
| **Headers** | Metadata like content type or auth tokens |

# Order a cappuccino via coffee shop's API

Coffe Shop

| | |
|---|---|
| **Endpoint** | A specific URL path(eg: /predict) - **/order** |
| **Method** | http method used - **POST** |
| **Request Body** | Data sent to API (json) - **mention the details about coffee - *{"drink": "cappuccini", "size":"medium"}*** |
| **Response** | Data returned by the API (json) - ***{"status": "confirmed", "eta":"5 mins"}*** |
| **Headers** | Metadata like content type or auth tokens - **Content-Type: application/json** |