

# Data-Hat Backend Developer Assignment

## Task: Build a FastAPI Backend for News & Weather Aggregation

We are a growing startup that delivers fast, reliable, and relevant news and weather updates to our users. We do not produce content, but aggregate, filter, and serve clean information from multiple sources to power our mobile applications.

Your task is to build a backend application using **FastAPI (Python)** that provides:

- **Authenticated access to news data**
- **Unauthenticated access to weather data**, using third-party APIs.



## Requirements

### Authentication Endpoints

- **POST /signup**: Register users with name, email, and password (hashed)
- **POST /login**: Authenticate users and return a JWT token
- **POST /logout**: Invalidate the session or token

### News Endpoint – Requires Authentication

- **Route**: GET /news
- **Description**: Fetches top headlines or search-based news using **NewsAPI**
- **Query Param**: search (*optional*)

### Example Response:

```
{  
  "count": 5,
```

```
"unit": "metric",  
"location": "Bangalore",  
"data": [  
  {  
    "date": "Sun March 06 2020",  
    "main": "Rain",  
    "temp": 293.55  
  },  
  {  
    "date": "Sun March 07 2020",  
    "main": "Sunny",  
    "temp": 294.64  
  }  
]  
}
```



## Constraints

- Use **FastAPI** (Python 3.8+)
- Use **JWT or similar** for authentication
- Return all API responses in **JSON**
- Provide **Swagger docs** at /docs
- Write a **README.md** for setup and usage
- Use **caching** to reduce third-party API load



## Assessment Criteria





- Project structure and modularity
- Code quality and secure practices
- Performance optimizations
- Swagger documentation

- Git usage and professionalism

## Nice to Have

- Rate-limiting
- Token refresh mechanism
- Dockerization
- Unit tests with **pytest**
- CI pipeline
- Multi-city support for weather
- Redis caching

## Submission

1. Push your solution to a GitHub repo (public or private)
2. Share the repo with: [saksham@data-hat.com](mailto:saksham@data-hat.com)
3. Include the following:
  - a.  Codebase
  - b.  README.md
  - c.  .env.example with placeholder variables
  - d.  (Optional): Postman or Swagger export