

# Backend Developer (Intern) – Project Assignment

## About the Assignment

We are seeking **Backend Developer Interns** (preferably 4th year students or recent graduates) who can design **secure, scalable backend systems**. Alongside building strong backend APIs, you will also create a **basic frontend UI** to demonstrate and interact with your APIs.

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## Assignment Overview

You will build a **Scalable REST API with Authentication & Role-Based Access**, and create a **simple frontend UI** for testing your APIs, within **3 days**.

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## Core Features to Implement

### ✓ Backend (Primary Focus)

- User registration & login APIs with password hashing and JWT authentication
- Role-based access (user vs admin)
- CRUD APIs for a secondary entity (e.g., tasks, notes, or products)
- API versioning, error handling, validation
- API documentation (Swagger/Postman)
- Database schema (Postgres/MySQL/MongoDB)

### ✓ Basic Frontend (Supportive)

- Build with **React.js / Next.js / Vanilla JS**
- Simple UI to:

- Register & log in users
- Access protected dashboard (JWT required)
- Perform CRUD actions on the entity
- Show error/success messages from API responses

### ✓ Security & Scalability



- Secure JWT token handling
  - Input sanitization & validation
  - Scalable project structure for new modules
  - Optional: caching (Redis), logging, or Docker deployment
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## Deliverables

1. Backend project hosted in GitHub with README.md setup
  2. Working APIs for authentication & CRUD
  3. Basic frontend UI that connects to your APIs
  4. API documentation (Swagger/Postman collection)
  5. Short scalability note (e.g., microservices, caching, load balancing)
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## Evaluation Criteria

- ✓ API design (REST principles, status codes, modularity)
- ✓ Database schema design & management
- ✓ Security practices (JWT handling, hashing, validation)

-  Functional frontend integration
-  Scalability & deployment readiness

## HOW TO APPLY

Send your resume and completed assignment (GitHub, portfolio, blog, etc.) along with the log files to **saami@bajarangs.com** and [nagasai@bajarangs.com](mailto:nagasai@bajarangs.com) & [chetan@bajarangs.com](mailto:chetan@bajarangs.com) CC to **sonika@primetrade.ai** with the subject:Frontend Developer Task

### Frontend Developer Intern

Candidates who advance will be notified within 3 business days. Don't wait – the most qualified candidates apply within the first 72 hours.

Ideal for: Recent graduates, bootcamp graduates, undergraduates, and crypto-native analysts who can demonstrate exceptional analytical ability.

Don't miss this rare opportunity to join a team that's redefining trading intelligence in the Web3 space. While others are analyzing historical data, you'll be shaping the future of crypto trading.

First come first serve, so get the task done asap