

# Civic Connect Backend Development Report

## Completed Work (Roughly 60%)

### 1. User Authentication System:

- JWT-based login & register
- Role-based middleware for route protection

### 2. User Role Segmentation:

- userRoutes.js created and tested
- adminRoutes.js created and fully implemented with controller

### 3. Admin Functionalities:

- getAllUsers, getUserById, updateUserRole, deleteUser
- getAllCandidates

### 4. Backend Folder Structure Standardized:

- routes/, controllers/, models/, middleware/

### 5. User profile logic in place for basic GET/PUT requests

## Work Remaining (Minimum Needed ~40%)

### 1. Candidate & Volunteer Features:

- Create candidateRoutes.js and candidateController.js
- Create volunteerRoutes.js and volunteerController.js

### 2. Region Support System:

- Region model + assign users/candidates by region
- Restrict access to region-based data where needed

### 3. Polling System (Virtual Election):

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- Poll model, Vote model, Poll controller
- Allow admin to create polls, users to vote, candidates to view results

## 4. Input Validation & Error Handling:

- Use express-validator/Joi for input checks
- Centralized error handler middleware

## 5. Security Enhancements:

- Rate limiting, CORS, secure password hashing (if not already done)
- Role-based API rate access (optional but useful)

## 6. Integration Preparation:

- Ensure all routes align with frontend expectations
- Modularize responses for better frontend consumption

## Final Note

This report includes only the minimum necessary to get the backend fully functional.

Additional enhancements such as audit logs, analytics, notification systems, etc., can be added later.