

You're thinking like a pro now, Joyce 🧠 — **security** is *critical* when dealing with something as sensitive as abuse reports.

Let's break it down layer by layer: **Database** → **APIs** → **Admins** → **Files** → **User privacy**.

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## 1. Database Security

### ☒ What you must do:

- **No Personal Data unless needed.**
  - Only store contact info *if victim consents*.
- **Use Django's built-in ORM.**
  - Avoid raw SQL to prevent SQL injection.
- **Encrypt sensitive fields (like phone numbers).**
  - Use Django packages like `django-cryptography`.

### Good Practices:

| Risk                      | Solution   |
|---------------------------|--|
| Hackers accessing your DB | Use strong DB passwords & limit DB access to your app only                   |
| Abuse of stored data      | Never expose the raw DB in your frontend                                     |
| Data theft                | Regularly back up and use encrypted storage (e.g., AES encryption for files) |

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## 2. API Security

### ☒ What you must do:

- **Authentication:**
  - Use Django REST Framework (DRF) with **token-based or JWT authentication** for admins.
- **Authorization:**
  - Only allow users with the correct **roles** to access or respond to reports.
- **Rate Limiting:**
  - Limit how often someone can hit your APIs (prevent bots).
- **Data Validation:**
  - Don't trust any incoming data — always validate abuse type, age, etc.
- **CORS Protection:**
  - Only allow requests from your frontend site (e.g., `https://sautiyetu.co.ke`).



### 3. Admin Security

#### ☒ Must-Have Features:

- **Unique accounts for each admin.**
- **Role-based access control.**
- **Two-Factor Authentication (2FA)** for superadmins.
- **Logs of every admin action** stored securely.
- Disable login for admins who leave the team or are unverified.

| Admin Level | Access                                  |
|-------------|---|
| SuperAdmin  | Can see logs, manage others             |
| Counselor   | Can view/respond to reports             |
| Analyst     | View data only, no access to identities |

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### 4. File Security (Voice Recordings)

#### ☒ How to protect them:

- **Upload to a secure folder** outside public access.
  - **Use random names** for files — never `voice_from_joyce.mp3`.
  - **Encrypt on save** and decrypt only when played by an authorized admin.
  - **Do not expose file URLs directly** — use temporary access links that expire.
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### 5. User Privacy & Safety

Your users (especially victims) need to feel **completely safe**.

#### ☒ Measures you must take:

- **Never require login to report abuse.**
- **Quick Exit button** that takes them to Google.
- **No cookies / no tracking pixels.**
- **Swahili option** ensures they understand every instruction.
- **All data optional unless consented.**
- **Contact info hidden unless victim agrees to be helped.**

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## 6. Deployment/Hosting Security

- Use **HTTPS (SSL)** only — no HTTP.
- Keep Django's `DEBUG = False` in production.
- **Set strong `ALLOWED_HOSTS`** in your settings file.
- Regularly update Django and all packages.
- Use a **firewall** on your server or host on a platform with built-in protection.

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## Summary – Your Full Security Stack

| Area                | What to Secure                                | Tools / Practices               |
|---------------------|---|---------------------------------|
| <b>Database</b>     | No personal data by default, encrypted fields | ORM, AES encryption             |
| <b>API</b>          | Auth, role-checks, rate limiting              | DRF, JWT, CORS                  |
| <b>Admins</b>       | Separate roles, 2FA, logging                  | Django Users + Permissions      |
| <b>Voice Files</b>  | Encrypted uploads, access control             | Random names, protected folders |
| <b>User Privacy</b> | Anonymity, safety tools, no cookies           | Consent-first design            |
| <b>Deployment</b>   | SSL, debug off, firewalls                     | Cloud host, strong configs      |

Would you like me to:

- Help you set up one of these in your Django project?
- Or give you a security checklist as a PDF for your planning?

You're creating a safe space — and it starts by *making sure it's actually safe*.  

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