

LogSabha App – Civic–Political Engagement Platform (Web & Mobile) Scope of Work

1. Executive Summary

We will build a **secure, multilingual Web + Mobile platform** with:

- **OTP login** (no passwords) for citizens.
 - **Verified leader profiles** (MPs, MLAs) with official data.
 - **Geo-tagged issue reporting** & auto-mapping to correct constituency/ward.
 - **Status tracking** for reported issues.
 - **Public engagement tools**: comments, DMs, groups, polls.
 - **AI-powered features**:
 - ✓ Election prediction dashboard.
 - ✓ Content moderation.
 - ✓ Meme & infographic creation.
 - ✓ Auto-translation.
 - ✓ Sentiment analysis.
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2. Objectives & Success Criteria

Objectives

- **Frictionless access** via OTP and full **local-language support** (all major Indian languages).
- Provide **trustworthy leader profiles** with affidavits, constituencies, and tenure history.
- **Streamline issue reporting** with auto constituency tagging & SLA tracking.
- Enable **civil, data-backed public discussions** with AI moderation.
- Deliver **analytics & AI insights** (sentiment, polls, demographics) for predictions.

Measurable Targets (12 weeks post-launch)

- **< 45s** median issue reporting time.
 - **30%+** weekly active user return rate.
 - **90%+** automated translation coverage with <5% flagged errors.
 - **P95 latency < 800ms** in India.
 - **100%** leader profiles verified from trusted sources.
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3. In-Scope Deliverables

Mobile Apps (Android & iOS)

- OTP login, multilingual UI, offline-safe drafts, push notifications.

Responsive Web App + REST API

- Same core features as mobile.
- Admin & analytics tools web-first.

Admin Console

- Leader verification.
- Content moderation.
- Issue triage.
- Poll approvals.
- Roles & permissions.
- Audit logs.

APIs & Microservices

- Authentication, profiles, issues, media, messaging, polls, analytics, AI services.

Data Pipelines & AI Services

- Translation, moderation, geo-tagging, sentiment analysis, meme/infographic generation, prediction models.

DevOps & CI/CD

- Dev/Staging/Prod environments.
- Observability & monitoring.
- Backups.
- Security hardening.

Documentation & Handover

- API & infrastructure runbooks.
 - Admin/user guides.
 - Test reports.
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4. Out of Scope (v1)

- Paid political ads / third-party ad networks.
 - Election campaigning tools violating ECI rules.
 - Deepfake / face-swap generation.
 - On-prem deployments.
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5. User Roles & Permissions

Role	Key Capabilities
Citizen User	OTP login, browse/follow, report issues, comment, vote in polls, DM leaders, join groups.
Leader / Staff	Manage profile, receive/update issues, broadcast updates.
Moderator	Approve/remove content, manage reports, mute/ban users, set filters.
Admin	Full system access, verification, mapping, poll approvals, role management.
Data Analyst (opt)	Read-only access to analytics & exports.

6. Functional Requirements

6.1 Authentication & Onboarding

- OTP login via SMS/WhatsApp (voice fallback).
- Fraud detection (throttling, device binding, reCAPTCHA).
- Secure token refresh & logout from all devices.
- Optional KYC-lite (future).

6.2 Multilingual Experience

- Hindi + all major Indian languages.
- Auto-translation for UGC with view-original toggle.
- Glossary for political terms.
- Right-to-left readiness for Urdu (v1.1).

6.3 Verified Leader Profiles

- MP, MLA, Mayor, Councillor entities.
- Official data: photo, party, symbol, contacts, constituency map, tenure.
- Affidavit & Election Commission references.
- Verification workflow with periodic re-check.

6.4 Issue Reporting & Tracking

- Title, description, category, media upload.
- AI geo-tagging & constituency mapping.
- Status flow: Reported → In Progress → Resolved (+ Reopen).
- Public feed with hashtags, filters, and upvotes/downvotes.
- SLA: default triage in 48h.

6.5 Public Engagement

- AI-moderated comments (toxicity, spam, hate speech detection).
- Hashtags, topics, searchable feeds.
- DMs: WhatsApp-style messaging with attachments.

- Groups/forums by ward/interest.

6.6 Polls & Public Opinion

- Poll types: single/multi-choice, ranked, sliders, yes/no.
- Target by region/followers/global.
- Fraud prevention & anonymous participation.
- Real-time results + CSV export.
- Passive sentiment tracking.

6.7 AI Meme & Infographic Creation

- Templates for awareness/satire (policy-compliant).
- Auto-captioning & multilingual export.
- Data-to-chart conversion with watermark.

6.8 Election Prediction Dashboard

- Inputs: polls, sentiment, historical data, demographics.
- Models: ensemble + explainable AI.
- Views: maps, leader comparisons, trend lines.
- Bias audits & disclaimers.

6.9 Admin Console

- Verification, mapping, moderation queues.
- SLA config & triage tools.
- Poll/group management.
- Audit logs & permission control.

7. Non-Functional Requirements

Security & Privacy

- OAuth2/OIDC, short-lived JWTs, AES-256 encryption.
- RBAC, secure media handling, virus scanning.

- Compliance: IT Act 2000, CERT-In, DPDP Act 2023, ECI norms.

Performance

- P95 API < 400ms for core reads.
- Page load < 1s on 4G.
- Heavy AI jobs in background.

Availability

- 99.5% uptime, multi-AZ, automated backups (RPO 24h, RTO 4h).

Scalability

- Horizontal scaling, CDN, queueing for spikes.

Accessibility

- WCAG 2.1 AA compliance, captions, contrast checks.
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8. System Architecture (High-Level)

Client

- Mobile: React Native/Flutter, offline cache, push notifications.
- Web: React/Next.js, responsive, PWA-ready.

Backend

- Node.js (NestJS) or .NET Core microservices.
- GraphQL + REST gateway.

Data Stores

- PostgreSQL, Elasticsearch/OpenSearch, Redis, S3-compatible storage.

AI Layer

- Python (FastAPI), NLP models, translation, moderation.
- Model registry & explainability tools.

Messaging

- MQTT/WebSockets, optional WhatsApp Business API.

Analytics

- Kafka/Kinesis → BigQuery/Snowflake → Metabase/Superset dashboards.

Infrastructure

- Kubernetes (EKS/AKS/GKE), Terraform IaC, OpenTelemetry, Prometheus, ELK.
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9. Technology Stack

- **Frontend:** React.js, Tailwind CSS, JavaScript (ES6+).
 - **Backend:** Python, Django, FastAPI.
 - **Database:** PostgreSQL, Redis.
 - **AI/ML:** TensorFlow, PyTorch, scikit-learn.
 - **DevOps:** Docker, NGINX, GitHub/GitLab, AWS, Certbot (SSL).
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10. Data & Integrations

- Election Commission, MyNeta, Census data.
 - SMS gateways, WhatsApp API, FCM/APNs.
 - Email via SES/SendGrid.
 - Fraud detection: device fingerprinting, reCAPTCHA.
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11. AI/ML Specifications

- **Translation:** NMT with glossary & human override.
 - **Moderation:** Multi-label classifier for abuse/toxicity/hate/spam.
 - **Geo-Tagging:** GPS + NLP place extraction.
 - **Meme/Infographics:** Text-to-image, data-to-chart, watermark.
 - **Sentiment & Prediction:** Gradient boosting + ensemble, bias audits.
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– End of Scope of Work –