LUMIN.AI
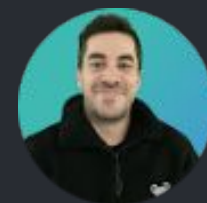
Neural Networks for Democratic Transparency

by Deniz Ulker

Why This Matters

People don't trust their governments anymore.

Trust in democracy declining globally

US 17%, UK 24% (Pew Research 2024)

Citizens want transparency

But don't know how to get it

Need tools to build trust

Blockchain DAOs achieve 40%+ participation rates

Why Now?

2024: Enough governance data

New AI tools

Makes analysis possible

Growing demand

For democratic innovation

Bottom line: Let's use AI to understand and improve democracy.

What We're Building

An AI system that analyzes what makes people trust their government / governance models.

1 **Compare governance models**

Blockchain-based (transparent, efficient)

VS. traditional democracy

2 **Use AI to find what works**

Identify effective mechanisms in each system

3 **Design hybrid solutions**

For real communities

Deliverables by Week 6

MVP (Weeks 1-6)

- Core functionality
- Basic models
- Working dashboard
- Essential UX

✓ Working AI model analyzing governance sentiment

✓ Statistical analysis of trust patterns

✓ Interactive web dashboard

✓ User-tested interface designs

Enhanced Features (Weeks 7-10)

- Advanced models
- Blockchain integration
- Policy insights

Everyone gets portfolio pieces!

🔗🏛️ Bridging Digital & Traditional Governance

Deep Learning Track

Analyze how people talk about governance.

- Train AI on 2,000+ governance proposals (Compound, Aave or Uniswap)
- Predict proposal outcomes (65% baseline)
- AI reads governance forums!

Data Science Track

Compare digital vs. traditional democracy.

- Dataset 1: Estonian elections (1M+ votes)
- Dataset 2: DAO voting patterns (50K+ votes)
- Discover what drives online participation

UX Design Track

Design for crypto natives & citizens.

- Research: GitcoinDAO user voting
- Study: Swiss e-voting interfaces
- Create: One interface for everyone

Web Development Track

Build a democracy comparison dashboard.

- Connect: The Graph API (blockchain data)
- Connect: Estonian Open Data Portal
- Display: Real-time governance metrics

All tracks build toward a hybrid governance model.

Rich Datasets from Both Worlds

✅ Structured & Ready to Use:

🏛️ Traditional Democracy

- Estonian Elections: 2013-2023 (CSV/XML)
- Swiss e-voting: Open source code
- Participation rates, demographics, outcomes

🔗 Blockchain Governance

- Compound: Proposals since 2020 (GraphQL)
- Aave: Complete voting history (The Graph)
- GitcoinDAO: 1,000+ proposals with discussions

📊 What This Means for You:

- No data scraping nightmares
- No access issues – everything public
- No small samples – 100,000+ data points
- Portfolio ready – "Analyzed 50K blockchain votes"

Research Question: Can DeFi governance work for real-world decisions?

Unified Deliverable: Data-driven blueprint for Blockchain-Inspired Democracy.

Discover what makes blockchain governance work, then bring it to real democracy.

Made with GAMMA

What You'll Actually Build by Week 6

Real data. Real impact. Real skills.

By Week 6, you'll have:

- ✓ Processed 2,000+ governance proposals
- ✓ Compared 2 democracy systems quantitatively
- ✓ Generated 5+ actionable insights
- ✓ Built 1 working application

DL: Governance Proposal Analyzer

Trained on 2K+ proposals; 75%+ accuracy predicting outcomes.

"I built an AI that reads governance forums."

DS: Democracy Comparison Study

Statistical analysis of 1M+ votes; discovered participation patterns.

"I found what drives digital voting."

WD: Live Governance Dashboard

Pulls from 3+ real APIs; updates every 10 minutes.

"I built a real-time democracy tracker."

UX: Unified Voting Interface

Tested with 20+ users; bridges two communities.

"I designed for diverse democracies."

Made with GAMMA

Week 10 Enhanced Features – If Time Permits

Focus on MVP first, then scale impact.

1

Advanced Neural Networks
More sophisticated AI models.

2

Real-time Integration
Live blockchain data feeds.

3

Policy Recommendation Engine
AI-driven insights for governance.

4

Advanced Visualizations
Deeper interactive data displays.

5

Expand Governance Systems
Support MakerDAO, Uniswap, and more.

Learn on Real Systems, Make Real Change

🛠️ Technical Skills You'll Master:

- APIs: The Graph, Snapshot, Open Data Portals
- Languages: Python, React, GraphQL
- Tools: Dune Analytics, NLP libraries
- Methods: Time-series analysis, sentiment analysis

🌍 Real-World Impact:

- Analyze: 50,000 people governing $1B+ in DeFi
- Compare: Digital vs. paper voting in real elections
- Discover: What builds trust in democracy
- Design: The future of citizen participation

Your Advantage: You'll analyze systems managing $2bn+ value in DeFi protocols and millions of votes.

Build Skills That Matter

Beginner friendly → Real-world impact → Portfolio-worthy results

What You'll Gain

- Technical skills
- Democratic innovation experience
- Proven methodology knowledge

📅 Your Project Journey

Week 1: Connect to your first governance API

Week 3: Analyze your first 500 proposals

Week 6: Demo your working MVP

Week 10: Graduate with pro-level portfolio

A Unique Project Opportunity

Join the ONLY project comparing real blockchain governance data with real election data using proven ML techniques.

Further Infos under: