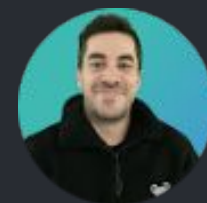


# Neural Networks for Democratic Transparency

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!

## UX Design Track

Design for crypto natives & citizens.

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

All tracks build toward a hybrid governance model.



## 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

## Web Development Track

Build a democracy comparison dashboard.

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

# 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.**

# 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."*

# Week 10 Enhanced Features – If Time Permits

Focus on MVP first, then scale impact.

1

## Advanced Neural Networks

Use 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 like 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:

LUMIN.AI Hub

RoadmapDocs

LUMIN.AI Documentation Hub

Comprehensive project documentation for all tracks and deliverables

Project Overview

Track Documentation

Project Documents

LUMIN.AI

Neural Networks for Democratic Transparency

Building the future of democratic governance through AI-powered analysis

Project Vision

Democratize access to governance analysis through neural networks that can understand and predict democratic participation patterns, transparency metrics, and citizen trust levels.

Real-world impact on democracy

Beginner-friendly implementation

MVP-first approach

Key Metrics

Timeline:

10 Weeks

Team Size:

4+ Techies

Tracks:

All 4 Required

MVP Delivery:

Week 6

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LUMIN.AI - Neural Networks for Democratic Transparency

FAILED

TechLabs

Berlin

license

MIT

python

3.9+

react

18.0+

Entry-level friendly AI project analyzing democratic governance through neural networks, combining cutting-edge technology with real-world social impact.

Project Overview

LUMIN.AI leverages machine learning to enhance democratic transparency by analyzing governance data from Austria's Democracy Radar surveys and blockchain governance systems.

Our MVP-first approach ensures meaningful deliverables while building towards advanced AI-powered policy insights.

Mission

Transform complex governance data into actionable insights that strengthen democratic participation and transparency.

Key Features

Sentiment Analysis: Neural networks analyzing public perception of governance

Trust Correlation: Statistical analysis linking transparency to public trust

Interactive Dashboard: Real-time visualization of democracy metrics

User-Centered Design: Intuitive interfaces for citizens, researchers, and policymakers

| <https://uelkerd.github.io/lumin-ai/> | <https://github.com/uelkerd/lumin-ai> |