

# NLP Blockchain Club / Group / Organization

## University Group

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### **Mission Statement**

The NLP Blockchain Club is a student-led organization at our university dedicated to the research, design, and development of the NLP Blockchain — a foundational infrastructure project of the NLP Foundation.

Our mission is to bring together students from computer science, business, linguistics, and entrepreneurship to collaborate on a real, long-term initiative that advances the field of natural language processing. We believe that deterministic, controllable, and explainable NLP is the future of the field, and that the governance infrastructure to support it must be open, permanent, and trustworthy.

As a student organization, we take full ownership of the project's direction, planning, and execution. We work in partnership with the NLP Foundation — whose founders serve as our advisors and client — to ensure that what we build is aligned with a decade-scale vision that will outlast any individual member or cohort.

We are not building a class project. We are building something that will matter.

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### **Project Plan: Building the NLP Blockchain**

#### **Overview**

The NLP Blockchain is the infrastructure layer that will govern the creation, validation, and evolution of dictionaries, knowledge bases, and linguistic algorithms that form the foundation of deterministic, human-level NLP. The club will approach this as a real-world project divided into four phases, with business and computer science students collaborating throughout.

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#### **Phase 1 — Discovery and Research**

##### *Months 1–3*

The first phase is about understanding the problem deeply before writing a single line of code or drafting a business plan.

**Computer science students will:**

- Research existing blockchain platforms and evaluate their suitability for governing linguistic data (e.g., Ethereum, Hyperledger, Solana, or a custom chain)
- Study the structure of NLP++ and VisualText to understand what kinds of data and transactions the blockchain will need to support
- Document the technical requirements for storing and versioning dictionaries, knowledge bases, and linguistic algorithms on-chain
- Review existing decentralized governance models in open-source and blockchain communities

**Business students will:**

- Research the governance structures of comparable organizations (IEEE, Linux Foundation, ISO) as models
- Define the stakeholders of the NLP Blockchain — who creates data, who validates it, who uses it, and who governs it
- Draft an initial business model canvas for the NLP Foundation's blockchain operations
- Identify potential funding sources: grants, university partnerships, medical industry clients, and Web3 funding mechanisms

**Joint deliverable:** A discovery report presented to the NLP Foundation founders covering technical feasibility, governance model options, and initial business case.

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**Phase 2 — Architecture and Design**

*Months 4–6*

With research complete, the club moves into designing the system before building it.

**Computer science students will:**

- Select the blockchain platform and justify the choice
- Design the data architecture: how dictionaries, knowledge bases, and algorithms are represented, stored, versioned, and retrieved on-chain

- Design the smart contract logic for governance: how entries are proposed, reviewed, approved, and recorded
- Create a technical specification document for the NLP Blockchain v1.0
- Design the NLP++ programmer certification registry — how credentials are issued, stored, and verified on-chain

**Business students will:**

- Design the governance framework: roles, voting rights, validation processes, and dispute resolution
- Draft the certification program structure: requirements, levels, assessment criteria, and fee model
- Develop a go-to-market plan for the first vertical — how the blockchain supports the NLP Foundation's medical NLP applications
- Begin outreach to potential university and industry partners

**Joint deliverable:** A full architecture and governance design document, reviewed and approved by the NLP Foundation advisory team.

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**Phase 3 — Prototype and Build**

*Months 7–12*

The club builds a working prototype of the NLP Blockchain based on the approved design.

**Computer science students will:**

- Deploy a testnet instance of the chosen blockchain
- Implement smart contracts for dictionary and knowledge base governance
- Build a basic front-end interface for submitting, reviewing, and approving linguistic entries
- Implement the certification registry smart contract
- Begin integration testing with sample NLP++ data

**Business students will:**

- Pilot the governance framework with club members acting as validators and contributors
- Document lessons learned from the governance pilot and propose refinements
- Draft partnership proposals for at least two external organizations — a university and an industry partner
- Develop a sustainability plan: how the NLP Blockchain funds its own operations long-term through certification fees, partnerships, and grants

**Joint deliverable:** A working prototype demonstrated to the NLP Foundation, with a governance pilot report and partnership pipeline.

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## **Phase 4 — Launch and Handoff**

*Months 13–18*

The club prepares the NLP Blockchain for real-world use and ensures continuity beyond the founding cohort.

### **Computer science students will:**

- Move from testnet to a mainnet or production-ready environment
- Conduct security audits and stress testing
- Write full technical documentation for future developers
- Onboard the first real NLP++ data — a portion of the English dictionary or a medical NLP dataset

### **Business students will:**

- Execute at least one formal partnership agreement
- Launch the NLP++ certification program in pilot form
- Establish the club's succession process: how new members are onboarded, how leadership transitions, and how the project survives graduation cycles
- Present the completed project to University leadership and external stakeholders

**Joint deliverable:** A production-ready NLP Blockchain v1.0, a live certification pilot, and a full handoff package for the next student cohort.

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## Ongoing Club Structure

<b>Role</b>	<b>Background</b>	<b>Responsibility</b>
President	Any	Overall direction, NLP Foundation liaison
Technical Lead	CS	Architecture and development oversight
Business Lead	Business	Governance, partnerships, funding
Research Lead	Any	Documentation and knowledge management
Outreach Lead	Any	University and industry partnerships

Meetings with NLP Foundation advisors will be held monthly. The club sets its own weekly meeting schedule and internal milestones.

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## Why This Project

- Real-world experience that employers recognize immediately
- Opportunity to be founding contributors to a global institution
- Cross-disciplinary collaboration that mirrors professional environments
- A project with continuity — what we build will outlast our time at Northeastern
- A direct path to full-time employment as the NLP Foundation grows and hires