Job Title: Principal Software Engineer (Consultant)
Reports to: President and CEO

Company Overview
National Community Investment Fund ("NCIF" www.ncif.org) is a national nonprofit Community Development Financial Institution (CDFI) and impact investor with a mission to increase access to responsible financial products and services in underserved communities. Since its founding in 1996, NCIF has invested/lent over $450 million, invested in 40+ CDFI and MDI banks and credit unions and created impact around its four key themes – economic opportunity, racial equity, environmental sustainability and strengthening of mission oriented financial institutions. Total AUM as of date are $248 million including $168 million off-balance sheet assets (e.g., New Markets Tax Credits (NMTC) deployments). Impact measurement has been foundational to NCIF investing/lending activities with the development of BankImpact.org and the AI-driven data analytics platform.

Job Summary
NCIF is seeking a Principal Software Engineer (Consultant) to lead the development of our current AI-driven data analytics platform. This platform will empower users to conduct natural language queries across multiple public, private, structured, and unstructured datasets, bringing powerful insights to the financial and impact investing sectors. The successful candidate will be responsible for the end-to-end architecture, design, and development of this web-based application, ensuring it meets the highest standards of security, scalability, and performance. The work will be pivotal to the evolution of NCIF's technology-driven mission. Upon successful launch of the platform, the position will transition to a full-time employee.

The person is a member of the senior management team with strategic and transactional responsibilities.

Key Responsibilities
- System Architecture Design:
    - Architect the AI-driven analytics platform on AWS, utilizing S3, Redshift, and RDS for data storage, focusing on security, scalability and performance;
    - Design secure, password-protected access mechanisms for end-user organizations, including the creation of storage areas for private data;
    - Develop a comprehensive Knowledge Base schema, incorporating domain-specific knowledge, vector embeddings, and metadata to ensure privacy and security.
- Platform Development:
    - Evaluate and recommend vector storage solutions for embedding and semantic retrieval optimization, including both open-source and private options;
    - Build a user interface/dashboard that supports natural language inputs and outputs in multiple formats, such as text, charts, tables, and maps;
    - Structure a gateway to access Large Language Models (LLMs) like GPT-4, Claude, and Mistral via APIs.

- Project Execution:
  - Collaborate with NCIF's leadership to understand key stakeholder needs, develop business models, build specifications, phases, timelines, and budget plans;
  - Lead the development and implementation of the web application, ensuring all components are integrated effectively;
  - Manage code reviews, ensuring adherence to best practices in software development and security standards.

Skills and Qualifications
- Technical Expertise:
  - Extensive experience in front-end and back-end development;
  - Strong understanding of relational databases and SQL, with a proven track record in system architecture and cloud-based deployments;
  - Deep knowledge of natural language processing (NLP) and generative AI models, with experience in developing and deploying AI-driven applications.
- Leadership and Communication:
  - Passion for using advanced computing and technologies to catalyze capital for generation of impact in underserved communities in the US and globally;
  - Demonstrated ability to lead complex software development projects from conception through deployment;
  - Excellent communication skills, with the ability to collaborate effectively with both technical and non-technical stakeholders;
  - Experience in mentoring and guiding junior developers, fostering a culture of learning and innovation.

Preferred Qualifications
- Advanced degree in Computer Science, Engineering, or a related field;
- At least eight years of experience in technology development and systems architecture;
- Experience with cloud platforms such as AWS, Azure, or Google Cloud, particularly in deploying AI models and managing large-scale data processing;
- Portfolio showcasing experience with generative AI and text-to-SQL applications.

Application Process
To apply, please send your resume, cover letter, and portfolio of relevant work to administration@ncif.org. Applications without a cover letter and portfolio will not be considered. We look forward to hearing from you.

Equal Opportunity Employer
NCIF is committed to providing equal employment opportunities to all employees and applicants, regardless of race, color, religion, gender, sexual orientation, national origin, age, disability, or veteran status. We encourage applications from all qualified individuals.

NCIF has a hybrid schedule with part remote/in-office work schedules. Preference will be given to candidates who are residents of Chicago or are willing to relocate.