



NATIVESPARK

NATIVESPARK INTEGRATION SOLUTIONS CORP.

valn97@mail.ru

Date: April 14, 2025

Presenter: Valeriia Nikitina, Co-CEO





COMPANY OVERVIEW



Background

Originally developed by Valeriia Nikitina and Valeriya Saltykova, NativeSpark Integration Solutions Corp. emerged from their unique expertise and shared vision. Although the platform was initially a collaborative effort, Valeriia Nikitina will now continue to develop the idea and platform independently.



Mission Statement

To empower Indigenous communities by providing a space to showcase their craftsmanship, connect with opportunities, and facilitate transactions in an engaging and supportive environment

INTRODUCTION

The platform will serve as a bridge connecting three distinct types of users—Indigenous Peoples, businesses, and regular consumers—while also integrating an administrative role for monitoring and oversight.



01

Three User Types:

- Business;
- Entrepreneur;
- Basic Consumer.

02

Sell items individually or in bulk and browse job postings and bulk order requests from businesses.

03

Businesses can place large-scale orders or post projects, specifying requirements like quantity and materials.

04

Regular consumers can purchase unique, handmade items



TECHNOLOGY STACK

Architecture

Model-View-Controller (MVC):

- Promotes separation of concerns
- Enhances maintainability and scalability

Backend Development

Java:

- Core language for business logic and server-side development

Spring Boot:

- Rapid development with embedded Tomcat
- RESTful services, dependency injection, and MVC support

Thymeleaf:

- Server-side templating engine
- Integrates seamlessly with Spring for dynamic HTML rendering

Frontend Technologies

HTML & CSS:

- Structure and custom styling of web pages

Bootstrap:

- Responsive design and UI components

JavaScript:

- Interactive UI elements (save buttons, toggles, form validations)



TECHNOLOGY STACK

Python Integration

Python:

- Used for scripting, data seeding, and recommendation engine

scikit-learn:

- Implements cosine similarity for product recommendations

SQLAlchemy:

- ORM used to interact with the MySQL database from Python

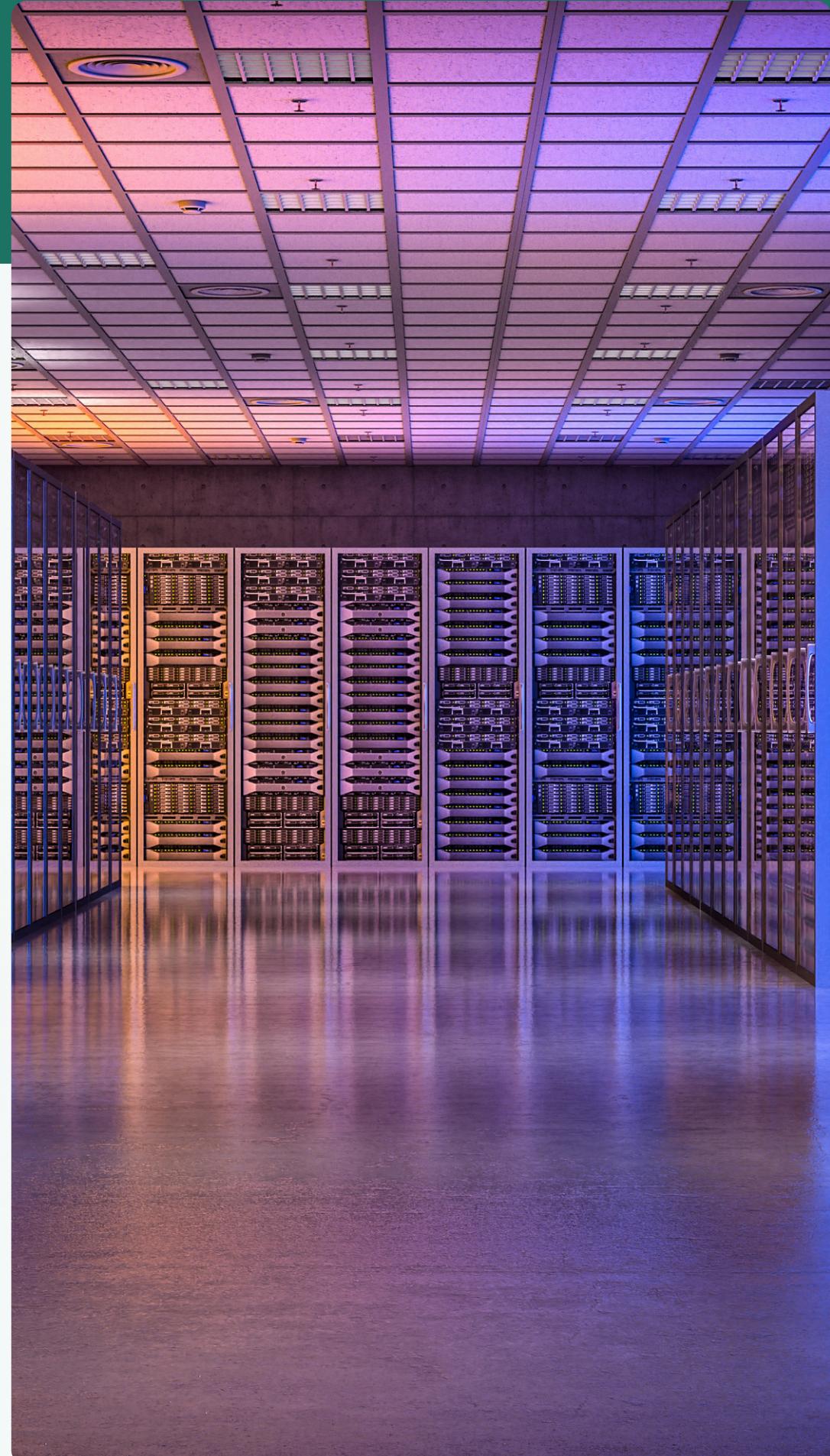
Faker:

- Generates mock data (users, products, transactions) for testing

Database

MySQL:

- Relational database system
- Stores all user, product, transaction, and recommendation data





KEY FEATURES

Platform Capabilities

- Multi-role registration
- Add to cart + checkout
- Save listings
- Custom orders
- Search & filters
- Buyer insights for entrepreneurs

Personalized Suggestions

- Category + price-based filtering
- Cosine similarity algorithm
- Local solution without external APIs



CHALLENGES & LESSONS

AI Matchmaking &
Chatbot postponed

Shift from XAMPP to
standalone MySQL



Java & Python
synergy explored

New interests: data
science, platform
deployment





NATIVESPARK

**THANK YOU
FOR YOU
ATTENTION!**

