

2025 Projects



PFE BOOK

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01 Who are we

Welcome to **DNEXT Intelligence SA**, a dynamic Swiss-based company specializing in agriculture commodity expertise. As dedicated leaders in commodities market analysis and agricultural commodity market research, we offer unparalleled insights across the global agricultural landscape. From world agricultural supply and demand estimates to agricultural commodity market trends, our expertise spans the entire spectrum.

At the heart of our offerings is our cutting-edge Data Intelligence Platform, a robust tool designed to empower agribusinesses and agricultural traders. With capabilities ranging from supply and demand analysis for agricultural commodities to risk management solutions, our platform is a one-stop hub for informed decision-making.

Why choose us? DNEXT Intelligence SA, a dynamic and privately-owned Swiss-based company specializing in agriculture commodity expertise. As independent leaders in commodities market analysis and agricultural commodity market research, we offer unparalleled insights across the global agricultural landscape. From world agricultural supply and demand estimates to agricultural commodity market trends, our expertise spans the entire spectrum.



What we stand for

DIVERSITY

We celebrate and embrace diversity, recognizing the unique qualities individuals bring to our organization. By fostering an inclusive environment, we empower everyone to contribute their best, driving innovation and success.

INNOVATION

We prioritize creativity, experimentation, and continuous improvement as essential values. By recognizing innovation as a key growth driver, we aim to pioneer new markets and develop products and services that meet evolving customer needs.

COMMITMENT

We emphasize dedication, accountability, and responsibility as crucial for achieving company goals. By fostering collaboration and a shared sense of purpose, we create a cohesive and goal-oriented work environment.

TEAM SPIRIT

We emphasize the importance of collaboration and cohesion in achieving shared goals. By fostering a positive team dynamic, we enhance performance and drive collective success.

Join our team

Empowering Careers at DNEXT: Investing in Your Growth from Day One

At **DNEXT**, we believe our employees are our most valuable asset.

Our primary goal is to provide unwavering support and targeted development opportunities to ensure each employee feels confident and well-equipped in their role. We recognize that our organization's success is directly tied to the fulfillment of our employees.

As part of our visionary approach, we aspire to create the most innovative data-driven platform in the industry, dedicated to supporting clients in the commodity sector. Achieving this goal requires a dedicated and skilled team, and we are committed to providing employees with the tools, training, and opportunities needed for meaningful contributions to our collective success.

Join DNEXT, where your career growth is a top priority, and your contributions play a crucial role in realizing our vision for a pioneering data-driven platform in the dynamic world of commodities. Explore the possibilities and be part of a team that values and invests in your professional development.



02 How to apply

1. Select Your Adventure

Choose the project that excites you the most and aligns with your skills.

2. Craft Your Message in a Bottle

Send your application, clearly stating the project name in the subject line, to these emails:

dnext.internship@dnext.io

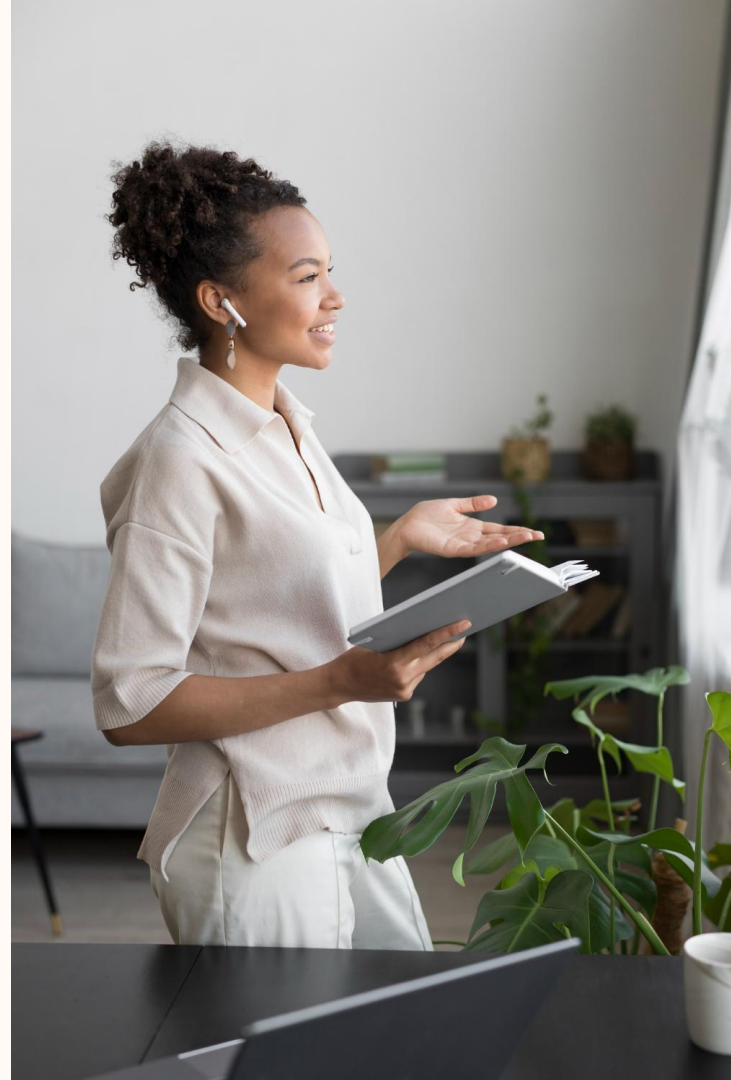
3. Test of Skill

Complete a technical test to showcase your knowledge.

4. The Final Showdown

Participate in an interview where you can discuss your potential contributions.

Embark on this journey and let's create something amazing together!



03 Projects

1. Captcha Resolution
2. Crusade
3. Data Quality Insurance
4. Pixel to Sheet
5. TAXi
6. Tender

Captcha Resolution

Solution to bypass Captcha

Project Overview

This project aims to develop a CAPTCHA resolution system that can efficiently and accurately bypass various types of CAPTCHAs encountered in online forms. The candidate will be responsible for researching different CAPTCHA formats, implementing resolution techniques, and evaluating the system's performance.

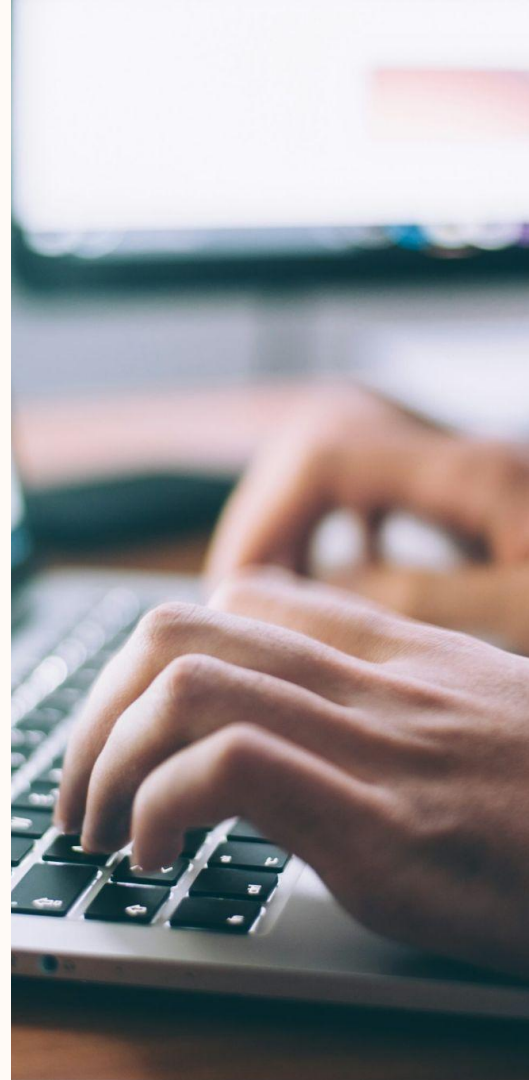
Project Description

In this role, you will:

- Analyze common CAPTCHA types (e.g., text-based, image recognition, audio CAPTCHAs).
- Develop algorithms utilizing machine learning and image processing techniques to automate CAPTCHA resolution.
- Test the system against a variety of CAPTCHA challenges to assess accuracy and efficiency.

Required Skills

- Programming Languages: Python, JavaScript
- Libraries/Frameworks: TensorFlow or PyTorch (for machine learning), OpenCV (for image processing)
- Tools: Web scraping tools (e.g., BeautifulSoup, Selenium), version control (Git)
- Development Environment: Jupyter Notebook or any suitable IDE



CruSade

Central Repository for Unified Scripts

Project Overview

Establish a centralized, accessible code repository that brings seamless version control, code review, and automation. In this role, you'll support the creation of a scalable infrastructure where scripts are accessible from any machine, securely versioned, and primed for collaboration and deployment.

Project Description

In this role, you will:

- Centralizes Code: Store and retrieve scripts on any device, ensuring access to the latest versions.
- Enables Version Control: Use Git for easy version history tracking and rollback capability.
- Supports Code Reviews: Implement a pull request workflow for collaborative code improvement and feedback.
- Ensures Scalability & Testing: Utilize CI/CD pipelines to automate testing and deployment, ensuring code stability.
- Enhances Development Flexibility: Containerize code using Docker for compatibility across machines and environments.

Required Skills

- Experience with Git and GitHub for version control, branching.
- Familiarity with CI/CD principles and GitHub Actions for automation.
- Basic understanding of AWS Lambda functions.
- Docker for containerization.
- Detail-oriented with an ability to manage multiple code versions and handle frequent updates.
- Collaborative and receptive to feedback in a team-oriented workflow.



Data Quality Insurance

Fighting the Forces of Bad Data | Duration: 4–6 Months

Project Overview

Uphold data integrity by detecting and preventing data anomalies across diverse datasets. As an intern, you will help build and maintain quality controls, ensuring we receive accurate data for different categories. With Quality Shield, you'll be part of the front line in maintaining clean data, harnessing automated tools and dashboards to identify quality issues.

Project Description

In this role, you will:

- Detect Data Anomalies: Identify and flag inconsistencies or outliers across multiple datasets.
- Generate Real-Time Alerts: Set up automated notifications via email and dashboards to inform about the detected data issues.
- Streamline Workflows: Use tools to automate data checks and validation procedures, ensuring continuous quality monitoring.

Required Skills

- Hands-on experience with Python and SQL.
- Basic Knowledge of dbt, for testing and managing data transformation workflows.
- Understanding of Airflow for workflow automation and orchestration.
- Docker for containerization.
- Strong attention to detail and accuracy in handling data checks and validation.
- Ability to interpret data quality results and communicate them effectively.
- Problem-solving mindset, with an ability to think critically about data and potential quality issues.



Pixel to Sheet

From Image to Structured Data | Duration: 5–7 Months

Project Overview

We will transform images into neatly organized, structured data files. This internship offers an exciting opportunity to work on converting complex image data into editable tables for spreadsheet software like Excel. As part of this project, you'll dive into image processing, text recognition, and the automation of data extraction.

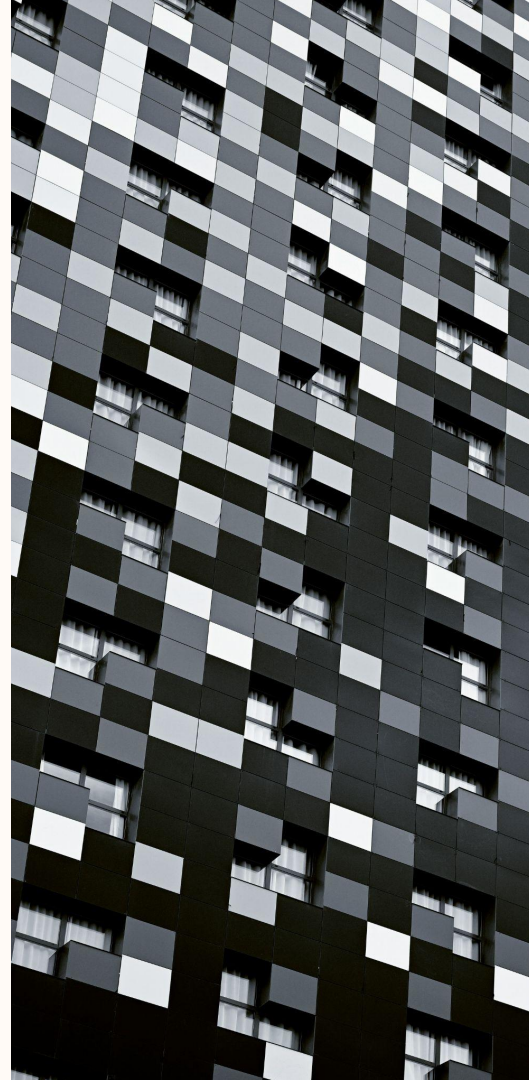
Project Description

In this role, you will:

- Analyzes and Processes Images: Detects and isolates tables from scanned images.
- Recognizes Text & Extracts Data: Uses advanced OCR techniques to identify, read, and structure data in detected tables.
- Outputs to Spreadsheet: Converts each table into a separate sheet within an Excel file, creating organized, editable datasets from image files.

Required Skills

- Experience with Image Processing tools, such as OpenCV and NumPy.
- Familiarity with Machine Learning / Deep Learning frameworks like TensorFlow or PyTorch.
- Basic knowledge on Generative AI and LLMs.
- Knowledge of Text Recognition algorithms and OCR principles.
- Hands-on experience with Python, including Pandas and PyPDF.
- A detail-oriented approach to ensure accuracy in data extraction.
- Strong problem-solving skills to tackle challenges in image-based text recognition.



TAXi

Exploring Global Taxes | Duration: 5-7 Months

Project Overview

Gain insights into global tax regulations and agricultural product pricing. Each country enforces distinct tax laws on imported and local agricultural goods, directly influencing buyer decisions across the industry. Our project aims to collect and analyze historical data on taxes and local prices from countries worldwide to understand the financial impact of these regulations. This analysis will empower companies to make data-driven choices on sourcing, determining whether to prioritize local purchases or imported products.

Project Description

In this role, you will:

- Research Global Tax Regulations: Collect tax data on agricultural products across different countries, focusing on historical tax data.
- Automate Data Collection and Quality Checks: Set up workflows and automated scripts to streamline the data collection process from various sources, and ensure data quality and consistency through validation scripts.
- Analyze Price Trends: Create a dashboard of the pricing trends of local agricultural products versus imported ones, including costs added at incoterms.

Required Skills

- Hands-on experience with Python and SQL.
- Basic Knowledge of dbt, for testing and managing data transformation workflows.
- Understanding of Airflow for workflow automation and orchestration.
- Docker for containerization.
- Strong attention to detail and accuracy in handling data checks and validation.
- Ability to interpret and analyze findings.
- Collaborative and receptive to feedback in a team-oriented workflow.



Tender

News Watcher | Duration: 6–8 Months

Project Overview

News Watcher project: As part of this dynamic team, you'll dive into the art of data and AI to transform vast news sources into actionable insights. Our mission? To automate real-time data collection, streamline report generation, and support intelligence goals.

Project Description

In this role, you will:

- Real-Time Intelligent Automation: Design workflows using advanced language models (LLMs) and real-time architecture to efficiently curate information and automate data extraction from news and media sources to populate a structured dataset.
- Actionable Reporting: Generate dynamic, accurate reports to highlight critical news insights and trends.

Required Skills

- Familiarity with Python and data processing frameworks.
- Familiarity with Deep Learning concepts.
- Basic understanding of Real-Time Architecture and Event-Driven Systems.
- Automation Tools (e.g., Airflow, or related) experience is a plus.
- Hands-on experience with Large Language Models (LLM) or a keen interest in learning.
- Strong problem-solving abilities and creativity.
- Self-starter attitude with a drive to learn new tools and techniques.



Do you have any questions?

Emails:

dnext.internship@dnext.io

Website: [DNEXT](#)

Join us!



Thanks!

