



PFE BOOK 2024

ExynoTech Engineering Services



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Who we are

ExypoTech is an innovative and dynamic startup on a mission to revolutionize the aquaculture industry through cutting-edge technology solutions. With a strong commitment to sustainable growth, increased productivity, and unwavering environmental stewardship, we are reshaping the future of fish farming. Our primary objective is clear: we aim to seamlessly integrate innovative technologies like artificial intelligence, machine learning, internet of things, and data analytics into aquaculture practices, transforming the way fish farming operates. By harnessing the power of technology, we empower fish farmers worldwide to optimize efficiency, enhance feed management, monitor water quality, and proactively detect diseases at an early stage.



Our values



Innovation

Continuously driving the integration of cutting-edge technologies to revolutionize fish farming



Sustainability

Prioritizing eco-friendly practices for sustainable aquaculture.



Transparency

Building trust through open communication and accountability.

Our missions

01

Provide advanced solutions that help farmers streamline production and make data-driven decisions.

02

Promote environmentally harmonious practices through precise insights and innovative technologies.

03

Collaborate with industry experts to continuously refine our technologies and shape a sustainable future for aquaculture.

“We're here to revolutionize aquaculture—empowering farmers with smart, connected tools to secure food for the future and build a more sustainable world.”

Wajih Elhadj Youssef

Co-Founder & CEO



Project EXY_01

Development of an AI-Based Embedded System for Counting Fish Juveniles.

This project focuses on designing a system that accurately counts fish juveniles in aquaculture environments. The system combines software and hardware to enable real-time monitoring, offering an efficient and scalable solution to improve fish farm management.

Required skills:

- **Basic knowledge :** AI, Embedded Systems, Programming, Data Annotation, Problem-Solving, Documentation
- **Technologies :** Python, C/C++, TensorFlow, PyTorch, NVIDIA Jetson, Raspberry Pi, OpenCV

Intern Responsibilities:

- **Data Collection and Annotation:** Gather and label images of fish juveniles for training purposes.
- **Model Development:** Create and refine detection models to ensure high accuracy.
- **Hardware Selection and Implementation:** Choose suitable hardware components and integrate them into the system.
- **System Testing:** Test the system in real-world conditions and refine its performance.
- **Documentation and Reporting:** Document all steps and regularly update the team on progress.

Project EXY_02

Development of a Management Platform for an IoT System Supervising Fish Growth

This project focuses on creating a management platform to oversee and optimize fish growth in aquaculture environments. The platform will centralize data from IoT devices, providing real-time insights and tools for efficient monitoring and decision-making.

Required skills:

- **Basic knowledge :** Web Development, Database Management, Programming, Problem-Solving, Documentation.
- **Technologies :** MongoDB, Express.js, Angular, Node.js, IoT Integration Tools.

Intern Responsibilities:

- **Requirement Analysis:** Understand and document the needs of the IoT-based system.
- **Platform Design:** Assist in designing an intuitive and functional interface for data visualization and management.
- **Development:** Build and implement the platform using the MEAN stack (MongoDB, Express.js, Angular, Node.js).
- **Integration:** Connect the platform with IoT devices for real-time data acquisition and control.
- **Testing and Debugging:** Test the platform for usability and fix any identified issues.
- **Documentation and Reporting:** Maintain detailed project records and communicate progress effectively.

Project EXY_03

Development of a Fish Disease Detection System

This project focuses on creating an AI-powered system to detect and diagnose fish diseases in aquaculture environments. By utilizing image recognition and machine learning, the system will analyze fish images or video feeds to identify symptoms and provide early warnings for potential outbreaks.

Required skills:

- **Basic knowledge :** Machine Learning, Computer Vision, Image Annotation, Problem-Solving, Documentation.
- **Technologies :** Python, TensorFlow, Keras, Pytorch, OpenCV

Intern Responsibilities:

- **Data Collection and Labeling:** Gather and annotate images of fish with various diseases for model training.
- **Model Development:** Design and train machine learning models to detect disease symptoms in fish.
- **System Integration:** Integrate the disease detection model into a real-time system for continuous monitoring.
- **Testing and Validation:** Test the system in real-world aquaculture environments to ensure accuracy and reliability.
- **Documentation and Reporting:** Maintain detailed records of the project and communicate progress regularly.

Project EXY_04

Designing the Graphic Charter for the Company

This project involves creating a comprehensive graphic charter for the company, including UI/UX design for digital platforms, visual materials (such as logos, color schemes, and typography), and document templates for consistent branding across all communication channels.

Required skills:

- **Basic knowledge :** Graphic Design, UI/UX Design, Branding, Prototyping, Attention to Detail
- **Technologies :** Adobe Creative Suite (Illustrator, Photoshop, XD), Figma, Sketch, Keyshot

Intern Responsibilities:

- **UI/UX Design:** Create user-friendly and visually appealing interfaces for the company's digital platforms.
- **Brand Identity:** Design visual materials such as logos, icons, and color palettes that align with the company's brand values.
- **Document Design:** Develop standardized templates for reports, presentations, and other official documents.
- **Prototyping:** Develop prototypes and mockups to present design ideas to the team.
- **Testing and Feedback:** Collect feedback on designs and make iterative improvements.

How to submit



Read and Choose a Project

Review the available projects and select the one that aligns with your skills and interests. Ensure you meet the required skills for the chosen project.

Fill Out the Form

Complete the application form with your personal details, qualifications, and project preference.

Interview

If shortlisted, you will be invited to an online interview where we will discuss your qualifications and project fit.

Join Us

Upon a successful interview, you will be welcomed to the team and begin your journey with the project.

Contact us

E-mail

contact@exypnotech-es.com

Social media

@exypnotech

Phone

+216 51 503 776

