RIVERBYTE
Streamlining Tech Solutions

PFE BOOK
2026

www.riverbytesoft.com

ABOUT US

Riverbyte Software is a modern Tunisian tech company based in Kelibia, specializing in the design and development of digital solutions that create real impact for businesses, clubs, and institutions.

Our mission is to deliver high-quality software, combining strong technical foundations with intuitive user experiences.

We operate across several domains, including:

- Web & Mobile Development
- Artificial Intelligence & Data Analysis
- Management Systems & Automation
- Real-time Applications & Sports Technology
- UI/UX Design & Digital Innovation

At Riverbyte Software, we believe in the power of young talent.

Every year, we open PFE opportunities to ambitious students who want to work on real projects, learn modern technologies, and contribute to solutions used by real clients.

Our internship philosophy is simple:

- Learn by building.
- Create meaningful impact.
- Grow with guidance and mentorship.

By joining RiverByte Software as a PFE intern, students become part of a motivated, creative, and quality-driven team—where innovation meets real-world application.

PROJECT 1

AI & Machine Learning Model for Sport Video Analysis - Ref: RS-26-1

Description

This project aims to develop an intelligent system capable of automatically analyzing sport videos to extract meaningful insights. The intern(s) will build an AI/ML model that can detect players, track movements, recognize actions, and generate performance indicators.

The solution will be designed for sports such as volleyball, football, or basketball, and will be used to support coaches in decision-making and match analysis

Objectives

- Collect and prepare sport video datasets (training, preprocessing, augmentation).
- Detect players and relevant objects using Computer Vision techniques.
- Implement a tracking model capable of following players/actions during the match.
- Build an action recognition module to classify key events (ex: pass, attack, block, goal…).
- Generate dashboards or reports summarizing the analysis.
- Optimize the model for real-time or near-real-time processing.

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Technologies & Skills

- Python ,Machine Learning & Deep Learning ,TensorFlow / PyTorch , Computer Vision (OpenCV, MediaPipe, YOLO…) ,Data processing and annotation tools , REST API development (optional) , Basics of data visualization

Intern Profile

- Students in Computer Science, Artificial Intelligence, Data Engineering, or related fields.
- Knowledge of ML/DL fundamentals.
- Interest in sports analytics is a plus.

Duration

- 4 to 6 months

Number of Slots

- 2 interns

PROJECT 2

Web-Based Live Score Synchronization System -- Ref: RS-26-2

Description

This project consists of developing an online platform that manages and synchronizes live scores for a specific sport across multiple matches.

The system will allow officials or scorekeepers to enter real-time scores, which will then be instantly synchronized and displayed on web dashboards, mobile views, or screens inside the venue.

The main objective is to centralize match data, ensure accuracy, and provide a seamless live update experience for viewers and organizers.

Objectives

- Build a central web platform to manage matches, teams, and score inputs.
- Implement a real-time synchronization system across all devices.
- Create a responsive UI for entering scores quickly during matches.
- Develop public dashboards to display live results for fans and staff.
- Add features such as match timelines, set progression, and status updates.
- Provide an admin space for tournament setup and management.
- Ensure the system scales for multiple matches running simultaneously.

Technologies & Skills

- Frontend: Next.js , ReactJs (recommended)
- Backend: NestJS / Laravel , WebSockets
- Database: MySQL / PostgreSQL / Redis
- API development
- Basic UI/UX skills
- Optional: Deployment on VPS, Docker, Nginx

Intern Profile

- Students in Software Engineering, Web Development, or Computer Science.
- Good understanding of frontend & backend development.
- Knowledge of real-time applications is a plus.
- Interested in sport-related digital systems.

Duration

- 4 to 6 months

Number of Slots

- 2 interns

PROJECT 3

Mobile Application for Entrance & Payments Management -- Ref: RS-26-3

Description

This project aims to develop a mobile application that manages entrance control and payment tracking for a club, academy, gym, or event-based organization.

The application will allow staff to validate member entries using QR codes or digital passes and record payments such as subscriptions, renewals, and on-site purchases.

The system should operate seamlessly, even with multiple users, and sync data securely with a central database.

Objectives

- Develop a mobile application for Android and/or iOS.
- Implement secure authentication for staff or administrators.
- Create QR code or digital pass scanning for entrance validation.
- Build a payment management module (subscriptions, renewals, receipts).
- Synchronize data with a cloud backend in real time.
- Provide dashboards for viewing attendance history and payment status.
- Ensure offline-first behavior with automatic sync once internet is available.
- Create a clean, easy-to-use mobile interface.

Technologies & Skills

- React Native (recommended)
- Backend: Node.js (NestJS), Laravel
- Database: Firebase SQLITE / MySQL
- State management (Bloc, Provider, Redux, etc.)
- Basic UI/UX design

Intern Profile

- Students in Mobile Development, Software Engineering, or IT.
- Basic knowledge of mobile frameworks (Flutter preferred).
- Interest in modern digital solutions for management systems.

Duration

- 4 to 6 months

Number of Slots

- 2 interns

HOW TO APPLY

1. Check your PFE book
2. Choose your project
3. Send your resume with the prefered project
   subject : First & last name - #REF
   contact @riverbytesoft.com
4. prepare your technical interview

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