

ZEMBRA PFE BOOK

Project Opportunities 2026

Data Collection Innovation

Turning internet into a database, unleashing growth potential for online reputation management businesses.



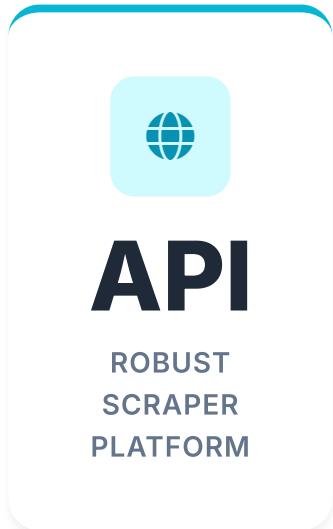
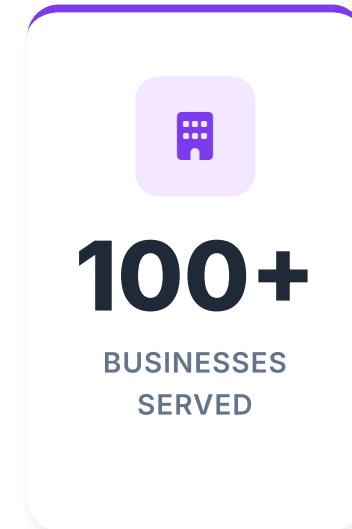
Zembra

Who We Are

Zembra is a diverse collective of thinkers and doers focused on helping online reputation management businesses grow.

Zembra helps online reputation management businesses grow using a **robust review scraper API**. We turn the internet into a database, unleashing a large potential for growth and product value.

Over the last **5 years**, we've built an innovative data collection solution and currently serve **100+ businesses**. Our community benefits from our expertise in web scraping and data collection.



Rewrite Proxy Framework

Modernize infrastructure by migrating from PHP to Python for enhanced performance

🌀 Project Objective

Complete architectural migration of existing proxy system from PHP to Python, optimizing performance, maintainability, and scalability for enterprise-grade data collection operations.

☰ Key Challenges

Preserve all existing functionality, ensure zero downtime during migration, optimize request handling speed, and implement robust error handling.

🔑 Expected Outcomes

Enhanced performance, easier maintenance, better scalability, and improved developer experience for future feature development.

</> Technology Stack

Python 3.10+

FastAPI

Django

Redis

Docker



Profile Required

Engineer or Bachelor degree in Computer Science

Reverse-Engineered LLM Interaction Models

Leverage and analyze AI platform responses for structured intelligence extraction



AI-Powered Scraping

Design and implement intelligent web scraping models powered by ChatGPT and LLM technologies for dynamic content extraction.



Tech Stack

NestJS
MySQL

Laravel
Redis

ChatGPT
Web Scraping



Core Features

- Deep analysis of LLM response behavior, structure, and reasoning patterns
- Reverse-engineered interaction strategies to elicit targeted, high-value outputs
- Adaptive prompt and interaction optimization based on model feedback loops
- Scalable orchestration for high-volume AI platform interactions



Engineer / Bachelor Profile

Engineer or Bachelor degree in Computer Science

Automate Social Network Scraping

Build automated data collection system for Facebook platform



Platform Target

Develop robust automation tools to collect data from Facebook, including posts, comments, profiles, and engagement metrics while respecting platform policies.



Core Features

- ✓ Automated scraping workflows with scheduling
- ✓ Rate limiting and anti-detection mechanisms
- ✓ Data validation and quality cleaning
- ✓ Real-time collection and monitoring



Tech Stack



PHP



Laravel



MySQL



Scraping



Engineer / Bachelor

Engineer or Bachelor degree in Computer Science

AI Voice Transcription & Emotional Intelligence System

Develop an AI-driven voice transcription and emotional analysis engine with real-time processing capabilities



Core Features

- ✓ Multilingual speech-to-text modeling across diverse accents and dialects
- ✓ Emotion and sentiment detection from vocal patterns and prosody
- ✓ Real-time and batch transcription pipelines
- ✓ High-accuracy inference through model optimization and fine-tuning
- ✓ Continuous learning from feedback and evaluation loops



AI Integration

Develop an AI-driven voice transcription and emotional analysis engine that processes audio input and outputs highly accurate, language-aware transcripts enriched with emotional context. Mobile integration (e.g., React Native) is secondary and treated as a thin client.



Tech Stack

AI / ML

Speech-to-Text LLMs

AUDIO & NLP

Signal Processing NLP Pipelines

BACKEND & DATA

Python Model APIs Data Pipelines

ML FRAMEWORKS

TensorFlow PyTorch



Required Profile

Engineer or Bachelor degree in Computer Science

AI Analyzer for Slack Channels

Intelligent alert management and analytics for team communication



Slack Integration

Collect, analyze, and manage alerts from multiple Slack channels using AI-powered intelligence for real-time monitoring and action.



Multiple Channels



Real-time Sync



AI-Powered Analysis

- Automated alert categorization
- Sentiment analysis of messages
- Pattern detection & insights
- Smart notification routing



Tech Stack

ReactJS

NestJS

AI/ML

TypeScript



Key Features

- Multi-channel support
- Alert aggregation dashboard
- Historical data analytics
- Custom notification rules

Required Profile

Engineer or Bachelor degree in Computer Science

Captcha Solver using AI

Advanced automated captcha solving with Computer Vision and LLM technologies



Intelligent Recognition

- Text-based captchas
- Pattern analysis
- Image recognition
- Real-time processing

Develop AI-powered system to automatically solve various types of captchas using advanced computer vision and object detection algorithms.



AI Integration

Leverage large language models (LLM) combined with computer vision techniques for accurate captcha recognition and solving capabilities.



Tech Stack

- AI/ML
- Computer Vision
- Object Detection
- LLM
- Python
- TensorFlow



Required Profile

Engineer or Bachelor degree in Computer Science

TECHNOLOGY STACK

Our Tech Stack

A comprehensive ecosystem of modern technologies powering our innovative solutions.



PHP Backend



Python Ecosystem



React JS



React Native



NestJS



AI & LLM



Web Scraping



Integration



Benefits

Grow your career with cutting-edge technologies and impactful projects.



Innovation at Scale

Work on a robust data collection solution serving 100+ businesses with 5 years of proven success.



Diverse Collective

Join a team of passionate thinkers and doers committed to transforming the online reputation management industry.



Growth Impact

Help businesses grow by turning the internet into a database and unleashing untapped product value.



Cutting-Edge Tech

Work with AI, LLM, web scraping, and modern frameworks like React Native and NestJS.



Data-Driven Vision

Be part of a mission to revolutionize how businesses leverage online data for reputation management.



Real-World Projects

Apply your skills to solve complex challenges in voice transcription, social scraping, and AI analytics.

JOIN OUR TEAM

How to Apply

Send Your Application

EMAIL ADDRESS

mourad@zembratech.com

- 1 Prepare your CV and relevant project portfolio
- 2 Include a brief cover letter explaining your interest
- 3 Specify which PFE project you're applying for
- 4 Send your application to the email above

Ready to Innovate?

Join our diverse collective of thinkers and doers. Transform data collection with AI and modern technologies.



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<https://zembratech.com>



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