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### Business Domain

Technology / Software Development / HR Tech / Recruitment

### Project Type

Platform, App

## AI-Powered CV Processing Platform Cuts Resume Processing Time by 90% and Transforms Recruitment Efficiency

### Client

A premier HR tech platform, operating in multiple countries, serving Fortune 500 companies and mid-market organizations, managing recruitment operations for thousands of enterprise clients with millions of candidate profiles.

### Project

An AI-powered platform that automates resume data extraction from PDF and DOCX files using OpenAI GPT-5.1. The solution processes CVs asynchronously, extracting structured candidate information across seven key categories and transforming documents into the client's standardized CV format. By reducing manual processing time by up to 90%, it enables recruiters to focus on candidate evaluation rather than data entry.

### Objective

The Client aimed to eliminate manual CV processing bottlenecks by automating multi-format data extraction, reducing processing time from hours to minutes, and enabling scalable, accurate, and integrated workflows, allowing recruiters to focus on candidate evaluation rather than data entry.

### Team Reinforcement

The Client needed specialized development resources to build an AI-powered CV processing system integrating advanced language models with modern Python frameworks and microservices architecture. Using a dedicated development team/Remote In-Sourcing® model, Intetics delivered a production-ready system with microservices architecture, OpenAI GPT-5.1 integration, comprehensive data extraction, and robust error handling. The partnership leveraged Intetics' expertise in AI/ML integration, modern Python development, and production-grade deployment.

## Challenge

Despite serving thousands of enterprise clients worldwide and processing hundreds of thousands of CVs annually for Fortune 500 companies, the Client faced significant manual processing bottlenecks. Recruiters spent hours on data entry, inconsistent formats led to quality issues, and scalability was limited. Additionally, the client lacked expertise in AI/ML integration, knowledge of modern Python frameworks (FastAPI, TaskIQ), and microservices architecture, requiring a proven technology partner to deliver an AI-driven automation solution.

Recruiters spent hours manually extracting CV data, creating bottlenecks and errors. CVs arrived in varied formats (PDF, DOCX) with inconsistent structures, leading to poor data quality. Manual processing couldn't scale for high volumes, and complex resume data required extensive time to structure. Blockers included a lack of AI/ML expertise, limited knowledge of Python frameworks, and insufficient experience with microservice architecture.

The Client lacked key technical expertise needed to build an AI-driven solution. This included limited experience with the OpenAI API and prompt engineering, as well as insufficient knowledge of FastAPI, TaskIQ, and microservices architecture. They also had no hands-on experience with distributed task queues (TaskIQ, Redis), production deployment, or data validation frameworks, and no track record in AI-powered automation. As a result, they required a trusted technology partner with proven expertise in AI integration, modern Python development, and production-grade systems.

### Quick Facts

- ✓ Production-ready system with systemd service deployment
- ✓ Comprehensive data extraction across 7 major categories
- ✓ Asynchronous processing with real-time status tracking
- ✓ Multi-format support (PDF and DOCX)
- ✓ RESTful API for seamless integration
- ✓ 90% reduction in CV processing time

### Technologies

FastAPI / Python 3.10+ / OpenAI GPT-5.1 / TaskIQ / Redis / MySQL / SQLAlchemy / Pydantic / pdfplumber / PyMuPDF / python-docx / Uvicorn / PyMySQL / taskiq-redis / python-dotenv / systemd

## Solution

### ★ 01

Automates CV processing from hours to minutes. Eliminates manual data entry, enabling recruiters to focus on candidate evaluation. Accelerates time-to-hire and improves candidate experience.

### ★ 02

Microservices architecture design; FastAPI, TaskIQ, OpenAI integration; 7-category data extraction; Database integration; Testing & validation; Production deployment.

### ★ 03

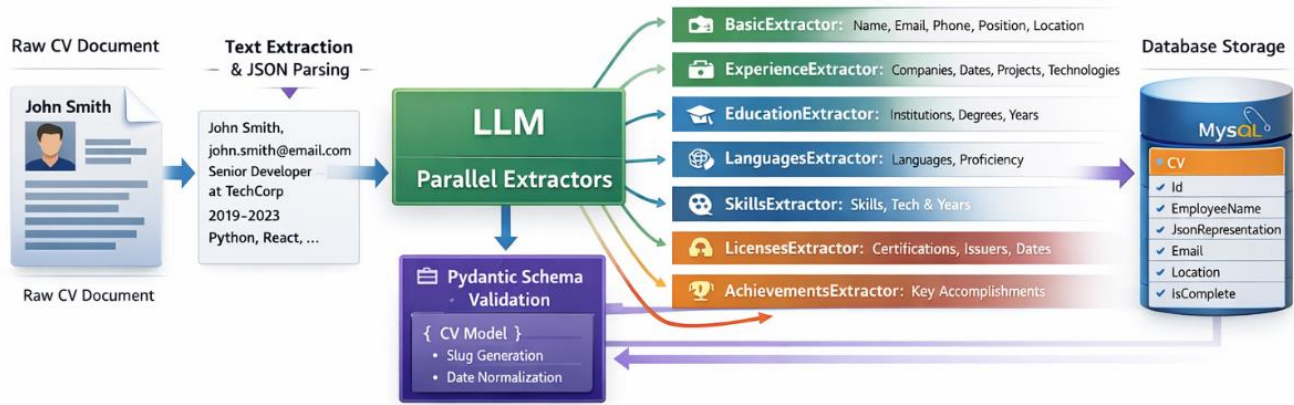
Focuses on business value: eliminating manual work, accelerating processing, improving data quality. Scalable and reliable architecture.

### ★ 04

EXPERTISE: AI/ML integration and prompt engineering  
REMOTE IN-SOURCING®: Specialized Python and microservices expertise

### ★ 05

System extracts text from uploaded CVs, uses OpenAI GPT-5.1 to extract structured data across seven categories, converts to client's template, and stores for immediate access. Real-time tracking enables proactive management. Transforms unstructured resumes into structured, searchable data through AI-powered extraction.



**Before:** "Senior Developer at TechCorp 2019-2023, Python, React..." → **After:** { "position\_slug": "senior\_developer", "company": "TechCorp", "start\_date": "2019-01-01", "end\_date": "2023-12-31", "technologies": ["Python", "React"] }

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## Client Reference



The AI CV Processor transformed our recruitment workflow, reducing CV processing time by 90%. Our recruiters now focus on candidate evaluation instead of data entry. Intetics delivered a scalable, production-ready solution that exceeded our expectations.

## Benefits and Results

- ★ Eliminated Manual Data Entry: Recruiters no longer spend hours manually extracting CV information, freeing them to focus on relationship building.
- ★ Reduced Processing Time: CV processing time reduced from hours to minutes per document, enabling faster candidate pipeline management.
- ★ Improved Data Quality: Consistent, structured data extraction ensures accurate candidate matching and search operations.
- ★ Accelerated Time-to-Hire: Faster CV processing enables quicker candidate response times and improved candidate experience.

### Techstack:

FastAPI / Python 3.10+ / OpenAI GPT-5.1 / TaskIQ / Redis / MySQL / SQLAlchemy / Pydantic / pdfplumber / PyMuPDF / python-docx / Uvicorn / PyMySQL / taskiq-redis / python-dotenv / systemd

### Team: 3

Project Manager, AI/ML Engineer, Full-stack Engineer