ARTIN

AIffinity

NMR-AI DRUG DISCOVERY

AIFFINITY

CASE STUDY

BIOTECH & DRUG DISCOVERY

An AI platform that combines NMR analysis with artificial intelligence to help scientists target potential drugs at specific proteins.

In 4 weeks, we built Allffinity a secure web portal in React + Node.js where pharmaceutical customers upload protein data, run AI analyses on remote servers via SSH and download the results – all in line with the strict security standards of the pharmaceutical industry.

CHALLENGE

Allffinity needed its pharmaceutical customers to be able to securely upload sensitive research data, run complex computations on remote servers and download the results – without having to understand the technology behind it. The key problem was providing a secure SSH connection to the compute servers, which goes beyond the scope of standard web development. At the same time, the whole solution had to be built on technologies the Allffinity team knows and can develop on its own after handover.

SOLUTION

- Secure web portal with user management and granular access rights
- Form-based interface for submitting computational jobs, setting their parameters and uploading input files
- Job queue management and real-time processing status tracking
- SSH integration for remote execution of computations on servers that meet pharma security standards
- Custom lightweight state protocol for secure tracking and delivery of results
- Option to deploy in an isolated environment directly on the client's infrastructure (behind their firewall)

TEAM SIZE

2 ARTIN people — 1 senior full-stack developer + project coordinator

TECHNOLOGIES

JavaScript · Node.js · React · Preact · Preact-signals

PROJECT DURATION

4 weeks (November – December 2024, over Christmas)

What the client valued most:

"ARTIN's ability to take a high-level, vague brief and turn it, together with the client, into a concrete, realistic product – without a lengthy ramp-up or unnecessary bureaucracy."

SOMETHING EXTRA

Handover with no vendor lock-in. At the end of the project, we went through the entire codebase with the client in two sessions – first a general overview of the architecture, then a Q&A covering every question that came up during real-world use. The portal was built on technologies the client knows and can develop on its own. No dependency on ARTIN.

"Although our requirements were very high-level at the start of the project, the people at ARTIN guided us through the process so that we got the solution we actually need."

— Václav Hanžl, Chief Software Engineer, Allffinity

EXPERTS IN YOUR FIELD, BUT NOT IN SOFTWARE DEVELOPMENT?

That's exactly why we're here.