



Contribution ID: 473

Type: Sectional talk

## Automating the generation of C++ code for fitting models in an application FITTER\_WEB based on artificial intelligence

*Tuesday 8 July 2025 17:00 (15 minutes)*

The FITTER\_WEB application is designed to solve the problem of fitting experimental data obtained in various physical experiments, and is deployed in the JINR cloud infrastructure. It uses the computing power of the ROOT package and provides a web interface for fitting data with theoretical models based on the resolution function. However, creating custom models required writing code manually, which could be difficult for some researchers.

This paper presents an extension of the functionality of this web application through integration with the DeepSeek artificial intelligence model. This allows you to automate the process of creating filtering functions in C++, which is especially useful for users who do not have deep programming knowledge.

**Authors:** СОЛОВЬЕВ, Алексей (JINR); СОЛОВЬЕВА, Татьяна (Jinr); ЛУКЪЯНОВ, Константин (JINR)

**Presenter:** СОЛОВЬЕВА, Татьяна (Jinr)

**Session Classification:** Methods and Technologies for Experimental Data Processing