# ABSTRACT

Explanatory note size – 89 pages, contains 18 illustrations, 40 tables, 4 applications, 49 references.

**Topicality.** Examines the problem in the field of atomic gRPC microservices development with the object of the atomic gRPC microservices development method, shows the main features of the existing solutions to the problem, their advantages and disadvantages. The need to improve the development method in the architectural style of RPC and to create a tool that will facilitate this has been identified.

**The aim of the study.** The main target is to simplify the use and creation of microservices in the RPC architectural style and to create a tooling tool for this.

**The object of research**: method for developing atomic gRPC microservices.

**The subject of research**: methods, models, and tooling tools for creating and using RPC microservices.

To achieve this goal, the **following tasks** were formulated:

− investigate and compare existing methods of atomic gRPC microservices development;

− provide a theoretical justification of the improved method;

− develop an improved method and tool;

− conduct a study of the evaluation of the effectiveness of the proposed method and tool.

**The scientific novelty** of the results of the master's dissertation is that the method of developing atomic gRPC microservices has been improved, which contributes to faster and more reliable development of microservice infrastructure, as well as a tool.

**The practical value** of the obtained results is that the improved method contributes to the faster and more reliable development of atomic gRPC microservices, which reduces the cost and development time. A tool was also created based on this method.

**Relationship with working with scientific programs, plans, topics.** Work was performed at the Department of Informatics and Software Engineering of the National Technical University of Ukraine «Kyiv Polytechnic Institute. Igor Sikorsky».

**Approbation.** The scientific provisions of the dissertation were tested at the Third All-Ukrainian scientific and practical conference of young scientists and students "Software engineering and advanced information technologies" (SoftTech-2022 autumn) - Kyiv.

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