Biography

Ivan Kochurkin (born June 19, 1990, Moscow)

Positive Technologies, Swiftify

Team Lead of Data Flow Analyzer Development

I am a Software Engineering graduate from Bauman Moscow State Technical University in 2011 (Bachelor's) and 2013 (Master's). Parsing and compilers have interested me since my student days.

While working at a web photo service in 2013, I developed a method for compiling the same C# code for both .NET and JavaScript. This inspired me to write an article: Universal C# Code for .NET and JavaScript.

In June 2015, I joined Positive Technologies, where I began working on implementation of a universal signature-based analyzer for code in different languages (C#, Java, PHP, PL/SQL, T-SQL, and JavaScript). The ANTLR parser generator was the logical choice based on its superior features and community at that point in time. Open-source PHP and T-SQL grammars were made, as well as major improvements to grammars for JavaScript, Java8, PL/SQL, Objective-C, and C#. These grammars are currently used in open-source and commercial products. The analyzer code is available online: PT.PM. In addition to my primary work, I have written a few articles on related topics:

- Theory and Practice of Source Code Parsing with ANTLR and Roslyn
- Tree structures processing and unified AST
- Pattern language for a universal signature-based code analyzer

In 2017, I started work on a new module for analyzing interprocedural data flows.

Since November 2016, I have been working at Swiftify, a startup for converting Objective-C code to Swift. There I have implemented support for preprocessing directives, improved the code base, and achieved significant performance gains in the parser and converter (article: Parsing Preprocessor Directives in Objective-C).

I am a maintainer for the grammars-v4 grammar repository (where I have made over 30 pull requests). I have also contributed improvements to the ANTLR parser generator itself (more than 20 pull requests).

Besides parsers and compilers, I have experience in image and audio processing, as well as web and desktop programming.

Profiles:

- LinkedIn
- GitHub
- Stackoverflow