The Application of Grammar Inference to Software Language Engineering

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resumen:

There are many problems whose solutions take the form of patterns that may be expressed using grammars (e.g., speech recognition, text processing, genetic sequencing, programming language development, etc.). Construction of these grammars is usually carried out by computer scientists working with domain experts. Grammar inference (GI) is the process of learning a grammar from examples, either positive (i.e., the pattern should be recognized by the grammar) and/or negative (i.e., the pattern should not be recognized by the grammar). and/or negative (i.e., the pattern should not be recognized by the grammar). This talk will present the application of grammar inference to software language engineering, including recovery of domain-specific language (DSL) specifications from example DSL programs and recovery of a meta model from instance models which have evolved independently of the original meta model. Recent advances in semantic inference will be presented as well.

sobre Marjan Mernik:

Marjan Mernik received the M.Sc. and Ph.D. degrees in computer science from the University of Maribor in 1994 and 1998, respectively. He is currently Professor of Computer Science at the University of Maribor, Slovenia. He is also Visiting Professor of Computer and Information Sciences at the University of Alabama at Birmingham, and at the University of Novi Sad, Faculty of Technical Sciences, Serbia. His research interests include programming languages, compilers, domain-specific (modeling) languages, grammar-based systems, grammatical inference, and evolutionary computations. He is a member of the IEEE, ACM, EAPLS, and the Editor-In-Chief of Computer Languages, Systems and Structures journal, as well as the Associate Editor of Applied Soft Computing journal.