Incremental Parsing with Error Recovery

Semyon Grigorev

Saint Petersburg Research Center

March 16, 2023

Mentor: Semyon Grigorev

- PhD, static code analysis, 2016
- 10 years in JetBrains
- 9 years in St Petersburg University (Associate professor)
- Research area: syntax guided data analysis
- s.v.grigorev@spbu.ru

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  - Incremental Parsing
    - ★ Fast reaction on code changes

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- Example: Tree-Sitter

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- Tasks
  - Support incremental paring in existing prototype
  - Optimize performance of existing prototype
  - Development of evaluation evaluation environment
    - Grammar of real-world language
    - Cases for incremental parsing
    - Cases for error recovery

Requrements

- Strong background in formal language theory and parsing algorithms ((G)LR, (G)LL)
- Strong background in F# or similar programming languages (e.g. Ocaml)
- Experience in nontrivial algorithms design, implementation, optimization.
- Deep knowledge in data structures internals (with respect to .NET and F#)