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Curtis Chin Jen Sem

github.com/crtschin crtschin.com

SUMMARY

Functional programming enthusiast and avid polyglot. A skilled software developer with a passion for learning and solving real-world problems in innovative ways.

EMPLOYMENT

Software Engineer

Scrive

08/2025 — Present

• TBD

Software Engineer

Channable

02/2021 - 07/2025

- Refactored infrastructure responsible for importing terabytes of data from external services per day, improving debuggability and observability.
- Designed and implemented AI-assisted categorization using state-of-the-art techniques for mass text classification, improving the existing model performance by 3x.
- Led the integration of user-defined computations into a high-performance compute pipeline through analysis, and application of programming language theory.
- Improved internal core systems by analyzing expressivity and usability, creating well-researched proposals, improving scalability, performance and developer experience.

Software Engineer

Cargowatch

02/2018 - 12/2020

- Implemented a specialized web portal for customer support and designed a DSL for invoicing specification.
- Algorithmically improved the existing automatic invoicing process.

EDUCATION

MSc. Computing Science

Utrecht University

2018 - 2020

- Thesis: Formalized Correctness Proofs of Automatic Differentiation in Coq. Proof was accomplished using logical relations accompanied by simple but effective language representations and denotational semantics.
- Coursework: Advanced Functional Programming, Compiler Construction, Program Semantics and Verification, Concepts of Program Design, Optimization and Vectorization.

BSc. Computer Science

Utrecht University

2015 - 2018

• Coursework: Data Structures, Algorithms, Functional Programming, Discrete Mathematics, Languages and Compilers.

PROJECTS

Helium

• Contributed to the Helium Haskell compiler developed at Utrecht University. Implemented missing Haskell2010 features and improved interoperability between recent experiments and previous work on the compiler.

PROGRAMMING LANGUAGES AND TECHNOLOGIES

- Programming Languages:
 - Proficient: Haskell, Python, Nix, SQL
 - ► Familiar: PHP, Typescript, C#
- Technologies: Git, PostgreSQL, Sqlite, Docker
- Languages: Dutch, English