# Curtis Chin Jen Sem

https://crtschin.com https://github.com/crtschin

## 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

#### Channable

02/2021 - Present

- 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 core capabilities by analyzing the expressivity and usability of internal systems, creating well-researched proposals, improving scalability, performance and developer experience.

## Software Engineer

## Cargowatch B.V.

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

#### Utrecht, Netherlands

## **Utrecht University**

2018 - 2020

- Master of Science in Computer Science
  - Thesis: Formalized Correctness Proofs of Automatic Differentiation in Coq.
- Coursework: Advanced Functional Programming, Compiler Construction, Program Semantics and Verification, Concepts of Program Design, Optimization and Vectorization.

#### Utrecht, Netherlands

#### Utrecht University

2015 - 2018

- Bachelor of Science in Computer Science
- Coursework: Data Structures, Algorithms, Functional Programming, Discrete Mathematics, Languages and Compilers.

#### **Projects**

#### • Helium (2020) Haskell

Contributed to the Helium Haskell compiler developed at Utrecht University. Implemented missing Haskell 2010 features and improved interoperability between recent experiments and previous work on the compiler.

• Nedtrain (Nederlandse Spoorwegen) (2018) C#

Hybrid planning program combining heuristical algorithmic techniques with an intuitive user interface for creating plans for shunting and scheduling problems.

#### Programming Languages and Technologies

- Proficient: Haskell, Python, Nix, Git, SQL
- Familiar: PHP, Typescript, C#

#### Languages

- Dutch: Native or bilingual proficiency
- English: Native or bilingual proficiency