

Curtis Chin Jen Sem

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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
<ul style="list-style-type: none">TBD		

Software Engineer	Channable	02/2021 — 07/2025
<ul style="list-style-type: none">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
<ul style="list-style-type: none">Implemented a specialized web portal for customer support and designed a DSL for invoicing specification.Algorithmically improved the existing automatic invoicing process.		

EDUCATION

Master of Science in Computer Science	Utrecht University	2018 — 2020
<ul style="list-style-type: none">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.		

Bachelor of Science in Computer Science	Utrecht University	2015 — 2018
<ul style="list-style-type: none">Final: Nedtrain (Nederlandse Spoorwegen). Hybrid planning program combining heuristical algorithmic techniques with an intuitive user interface for creating plans for shunting and scheduling problems.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