Timothy Elgersma

4A, University of Waterloo, Computer Science

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Summary of Qualifications

- **Languages**: C++, Java, Javascript, Kotlin, LaTeX, OCaml, Python, SQL, Scala, Typescript
- Commended by managers for being a dependable, productive, and adaptable team member
- Excellent communication skills demonstrated through documentation, peer mentorship, presentations, and team meetings

Experience

September 2020 – December 2020

Compiler Engineer | Huawei
Python, C++

- Dramatically reduced time-to-debug by designing and implementing a script to identify the failing shader and optimization pass of an image generated with the Bisheng GPU compiler
- Combined several debug channels on a simulated device to rule out 80% of previously identified failures

January 2020 – April 2020

Backend Developer | Faire
Kotlin, PostgreSQL

- Increased Faire's contribution margin by 180bps by implementing payment assistance plans and allowing the risk team to make timely, informed decisions by surfacing relevant customer and Plaid data
- Decreased customer support ticket count by 9% through heuristics to auto-handle common requests
- Refactored customer invoices for correctness, clarity, and simplicity

May 2019 – August 2019

Software Developer | Genesys
Typescript, Javascript, MySQL

- Designed and documented Genesys Conversation Provider's database access module
- Improved solution resiliency by implementing a persistent queue for asynchronous backend communication

September 2018 – December 2018

Software Developer | Encircle
Python, Java, PostgreSQL, LaTeX

- Designed and implemented Encircle's Moisture Mitigation report generator using Python and SQLAlchemy
- Reduced bugs, increased coherency, and reflected new model changes by rewriting and refactoring Coffeescript and Typescript mobile core

Projects

January 2021 – April 2021

Joos Compiler
Scala

- Compiles Joos 1W, a large subset of Java, directly into assembly for CS 444 (Compiler Construction)
- Designed and implemented scanning, parsing, analysis, and code generation in Scala

June 2020 – September 2020

Crop Companion
Java

- Created an Android app that generates a planting schedule for a balanced diet for a varying population
- Implemented and tested the calculations, and designed and implemented various input screens

January 2019 – Present

Resume Creator
Python, LaTeX

- Implemented a Python script and LaTeX template to generate a resume from YAML

Education

September 2017 – April 2022

University of Waterloo | Bachelor of Computer Science

- Currently enrolled in 4A of a Bachelor of Computer Science
- **Relevant coursework**: CS 341 (Algorithms), CS 446 (Software Architecture), CS 458 (Security)