

Spencer Comin

COMPILER DEVELOPER

275 Main Street N
Markham, ON L3P 1Y6
Canada

+1 (825) 365 5503
spencer@comin.ca
github.com/Spencer-Comin

Objective

Compiler Developer looking to get involved in cutting-edge compiler and runtime projects

Work and Research Experience

JIT Compiler Developer, IBM; Markham, ON — January 2022 - present

github.com/eclipse-openj9/openj9 github.com/eclipse/omr

- ▶ Developing JIT compiler exploitations for new features in experimental mainframe hardware
- ▶ Investigating novel compiler optimizations that target multiple architectures
- ▶ Benchmarking and profiling real-world applications to determine performance improvement
- ▶ Presented compiler features at open source OMR architecture meetings
- ▶ Developed 22x improvement to checksum calculation in Kafka use case
 - ▶ <https://community.ibm.com/community/user/ibmz-and-linuxone/blogs/marc-beyerle/2023/11/21/semeru-crc32c-apache-kafka-performance>

Software Intern, Eideticom; Calgary, AB — May - December 2021

eideticom.com

- ▶ Developed Python scripting toolset for debugging software-hardware communication
- ▶ Contributed to native and Python libraries for driving experimental emerging storage systems hardware

Capstone Project Student, Eideticom; Calgary, AB — September 2020 - April 2021

github.com/Eideticom/eid-hermes

- ▶ Designed a softcore eBPF native processor for deployment on AWS F1 cloud FPGAs

Research Assistant, Technische Universität Berlin; Berlin, Germany — May - July 2019

emk.tu-berlin.de

- ▶ Worked in the lab designing, building and testing proof-of-concept and prototype electrostatic devices

Education

University of Calgary — Bachelor of Science, Electrical Engineering; December 2021; 3.55/4 GPA

Technologies, Hobbies, Personal Projects

Competitive Programming

- ▶ Schulich Engineering Competition — 2019 (first place), 2020 (first place)
- ▶ Western Engineering Competition — 2020, 2021 (second place)
- ▶ Canadian Engineering Competition — 2021
- ▶ Google FooBar challenge

Programming Language Design

- ▶ PLVM & PLox — Study group for the *Crafting Interpreters* book; implementing the Lox language in Pascal
- ▶ Fern — An experimental language for tinkering with compiler concepts; built with Prolog, OCaml and LLVM
 - ★ github.com/Spencer-Comin/Fern

Technologies		Languages		Architectures	
LLVM	eBPF	C/C++	Python	AArch64	x86
lldb/gdb/dbx	FPGA	Spanish	OCaml	PowerPC	s390x (IBM Z)