

James Siddeley

19 Rathgar Ave, ON • +1 (647) 548 7501 • Toronto/Hamilton • siddelej@mcmaster.ca • [in James Siddeley](#)

HIGHLIGHTS OF QUALIFICATIONS

- Fourth-year Computer Science student at McMaster University (expected graduation April 2027).
- Proven ability to independently drive complex initiatives with root-cause analysis, design and implementation across teams.
- A very strong communicator with the ability to translate technical concepts across teams in a digestible manner.
- Hands-on experience with low-level systems and GPU performance tooling in Python and C across the AMD ROCm stack.

EDUCATION

McMaster University | Computer Science 4 - Faculty of Engineering: Expected Graduation April 2027

Relevant Courses: Operating Systems, Computer Architecture, Data Structures and Algorithms, Linear Algebra, Machine Learning

SKILLS

Languages: **Python, C, C#, Bash, JavaScript, HTML, SQL**

Frameworks/Tools: **AMD ROCm, ROCprofiler, ROCprofiler-Compute, PyTorch, Node.js, Express.js, Microsoft Access, Excel, Git, GitHub**

WORK EXPERIENCE

Software Engineering Intern – AMD May 2025 - August 2026 (16 month co-op)

ROCprof Compute Team • github.com/jamessiddeley-amd

- Core team member of the **ROCprof Compute Team** and one of the **top contributors** to the rocm-systems super repository, driving several complex initiatives at a **Senior Software Developer level**.
- Co-developed AMD's secure enterprise AI documentation search platform (Graph RAG + MCP) for MI-series GPU documentation.
 - Applied per-query **access filtering** so users only retrieve confidential GPU architecture docs their **NDA** clearance allows.
 - Enabled engineers to **query hardware documentation** directly from AI coding assistants (e.g., Claude Code, Cline).
 - Drafted the security architecture report and **drove the InfoSec approval** that enabled local deployment by AMD engineers.
 - Integrated the platform into my team's daily workflow, **dramatically improving productivity** on Rocprofiler-Compute **MI400 development**.
 - Authored a **research paper** on this work, submitted to Global Technical Authors Conference (**GTAC**) 2026.
- Led investigation of **MI400 LDS/GLO** high level design, counters and derived metrics, presenting to a team of highly experienced senior GPU engineers.
- Reduced on-disk profiling artifact size by **97%** through gzip compression and **removed redundant data processing** that was dominating runtime on AI-scale workloads through several high level architectural redesigns.
- **Improved roofline analysis** by adding **LDS arithmetic intensity plots** and completely overhauling the standalone roofline HTML report into an **interactive tool** with per-roof filtering, click-to-isolate kernel selection, and more.
- Singlehandedly raised overall product code coverage from **60% to 82%** and **built automated code coverage** and CDash pipelines.

Data Analysis Coop Intern - Enercare May 2024 - August 2024

- Managed and optimized truck inventory using Microsoft Access and Excel, **improving** availability and profiling **accuracy by 170%**.
- Built a VBA/SQL system to import Power BI tables, calculate data, and auto-generate reports; **now adopted across all Enercare Supply Chain operations**.

PERSONAL PROJECTS

HedgeFantasy | Web Application: 2025-2026

- Built a full-stack sports fantasy analytics app (Next.js, TypeScript, React) for NBA/NFL Sleeper and ESPN leagues with weekly recaps, power rankings, trade analysis, and more.
- Recomputed stats from game-level API data and implemented dynamic point adjustments based on a user's league settings.
- Deployed production app with mobile-responsive UI.

SO-VITS-SVC Voice Models | Machine Learning: August 2024

- Trained 20+ custom voice conversion models locally using SO-VITS-SVC, fine-tuning across epochs on cleaned audio datasets.
- Built end-to-end pipeline: dataset prep, training, inference, and production of a full vocal track using multiple trained models.
- Produced, wrote and recorded my own songs in Adobe Audition with the models I trained!

HONORS AND AWARDS

Michael Power St. Joseph High School - 4 Years Honors Diploma | Received the Calculus and Computer Science graduating awards