

# Victoria Chernobay

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## TECHNICAL SKILLS

**Hardware & Embedded Systems:** NVIDIA Jetson Nano, Arduino, Raspberry Pi, ARM Architecture, CAN bus, PID Control, I2C/SPI, Motor Control, PCB Wiring, SolidWorks, Onshape

**Software & Languages:** Java, Python (OpenCV, Mediapipe), C/C++, MATLAB, JavaScript, HTML/CSS, Git/GitHub, Linux (Ubuntu/Debian)

**Cloud & AI:** SAP BTP, Google Gemini API (LLM Integration), RESTful APIs, Data Visualization, Computer Vision

**Business & Leadership:** Sponsorship Acquisition (\$360k+), Project Lifecycle Management, Public Speaking, Event Logistics

## PROFESSIONAL EXPERIENCE

### Physical AI Lab Intern

Jan 2026 – Present

SAP

Toronto, ON

- Developing autonomous "Physical AI" prototypes using **NVIDIA SoC** and DeepSeek models to bridge digital business logic with real-world industrial hardware.
- Testing and optimizing hardware-software communication protocols on **Raspberry Pi** to ensure low-latency response times for automated warehouse processes.
- Collaborating with cross-functional teams to establish the technical foundation for SAP's global physical AI research infrastructure.

### Founder & Team Captain

Sep 2022 – Jul 2025

FRC Team 9262

Toronto, ON

- Independently founded and built a robotics organization from the ground up, scaling to 100+ student members and establishing a sustainable multi-year operational structure.
- Secured **\$60,000 in corporate sponsorships** by pitching technical and business value to engineering firms, managing the entire team budget and equipment procurement.
- Led the design and integration of the electrical architecture for a **120lb robot**, utilizing **CAN bus** networking and vision targeting to achieve a **Top 10 National Ranking**.
- Directed the team to a Provincial Semi-Finalist finish and earned the **Rookie All-Star Award**, validating the robot's technical reliability and the team's professional management.

### Hackathon Organizer

Feb 2026 – Present

Upcoming Hardware Hackathon

Toronto, ON

- Managing the technical vision and logistics for an upcoming competition, overseeing hardware resource allocation and workshop curriculum for 100+ engineering students.
- Coordinating with industry partners to provide microcontrollers and sensors, ensuring participants have the necessary tools for rapid hardware prototyping.

### Engineering Co-op Student

Jan 2024 – Jul 2024

SAP

Toronto, ON

- Engineered a workflow automation tool on the **SAP BTP** platform, integrating GPT-4o and Google APIs to help developers automate manual documentation and code review tasks.
- Communicated complex technical concepts to non-technical stakeholders, including a live demonstration for over 100 educators at a provincial conference.

## ENGINEERING PROJECTS

### VitalGroove — AI Mechatronic System | MakeUofT Hackathon

Feb 2026

- Architected a "Sense-Think-Act" loop on an **NVIDIA Jetson Nano** that uses **Computer Vision (Mediapipe)** to detect human interaction and trigger a physical response.
- Developed a serial communication "handshake" between Python (AI processing) and C++ (Arduino hardware control) to synchronize a servo-driven candy dispenser with real-time detection.
- Overcame hardware constraints by optimizing a Vision-Language Model (VLM) to run on limited RAM, ensuring the system could process camera feeds and LLM requests without crashing.

**FRC "Crescendo" Competition Robot | Java, SolidWorks, PID Control**

2024

- Modeled a **120lb robot** in SolidWorks to ensure structural integrity and modularity, allowing for fast repairs during high-stakes competition matches.
- Implemented **PID control loops in Java** for the drivetrain and shooter motors, allowing the robot to move precisely and launch objects with repeatable accuracy.

**Keep on Cooking — Mechanical Design | McMaster CAD Designathon**

Jan 2026

- Designed a custom conveyor-belt hardware mechanism in **Onshape** and **Blender** to create a physical "Pomodoro" timer that interacts with the user's office space.

**LEADERSHIP & AWARDS****FIRST Youth Council**

Toronto, ON

*Fundraising Lead*

2024 – 2025

- Spearheaded a charity gala that raised **\$300,000** for youth STEM programs by managing donor relations and event logistics for high-profile corporate partners.

**Kode With Klossy Scholar**

Remote

*Data Science & Web Development*

2023 – 2024

- Selected for a competitive scholarship program; developed full-stack websites using APIs to visualize correlations between environmental data and public health.

**EDUCATION****Toronto Metropolitan University**

Toronto, ON

*Bachelor of Engineering (BEng Hons) in Computer Engineering*

Sep 2025 – May 2030