

Bryan-Elliott Tam

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Computer Engineer with a background in Mechanical Engineering and experience in full-stack development, IoT systems and R&D. Currently pursuing a PhD in Computer Science Engineering in Belgium. Personal projects and open-source contributions available at <https://constraint-automaton.pp.ua>.

SKILLS

- **Programming Languages:** TypeScript, Prolog, Rust, Python, Go, SMT-LIB, C++, Bash
- **Technologies:** Linux, Git, SPARQL, RDF, Svelte, Vue.js, React, Docker, Z3, MongoDB, Neo4j, PyQt, Node-RED, SolidWorks, Creo
- **Natural Languages:** French, English

WORK EXPERIENCES

Search Engine Developer (Research Assistant) May 2022 — September 2022
Université Laval *Sainte-Foy, Qc, Canada*

Developed a custom search engine to support architecture researchers in retrieving relevant literature, using Go, Python, and JavaScript.

Localization Systems Developer (Research Assistant) May 2020 — September 2020
Université Laval *Sainte-Foy, Qc, Canada*

Transformed a 2D excavator localization system into a 3D solution, increasing positional accuracy by integrating map data and turret orientation; developed using C++ and Python.

IoT and Web Developer October 2018 — March 2020
Systèmes Vireo *Sainte-Foy, Qc, Canada*

Designed and deployed an IoT system for managing hydroponic components in an urban agriculture startup, combining embedded systems (C++, PlatformIO, MQTT, KiCad) with full-stack development (React, TypeScript, Node.js, REST/GraphQL APIs, MongoDB, Node-RED); also led on-site installation and testing.

IoT Developer (Intern) May 2018 — August 2018
Systèmes Vireo *Sainte-Foy, Qc, Canada*

Designed electronic systems for hydroponic applications, including schematic design with KiCad and development of a management interface using Python and PyQt.

EDUCATION

Universiteit Gent 2022 — Present
Doctorate, Computer Science Engineering *Gent, Belgium*

- Research Topic: Decentralized Web Querying of Knowledge Graphs Databases
- Teaching assistant for the Knowledge Graphs course
- Member of the program committee for the [SEMANTiCS 2025 Developers Workshop](#)
- Developer for the [Comunica software](#), “[a] knowledge graph querying framework for JavaScript.”

Université Laval 2020 — 2022
Master of Sciences, Computer Science *Sainte-Foy, Qc, Canada*

- Thesis topic: Digital Twin to Improve Training and Performance of Forestry Operators

Université Laval 2015 — 2019
Bachelor of Engineering, Mechanical Engineering *Sainte-Foy, Qc, Canada*