


# Bryan-Elliott Tam

+32 0472 13 14 28 | [bryan\\_elliott\\_tam@protonmail.com](mailto:bryan_elliott_tam@protonmail.com) | [github.com/constraintAutomaton](https://github.com/constraintAutomaton) | [linkedin.com/in/bryanelliotttam/](https://linkedin.com/in/bryanelliotttam/) | [constraint-automaton.pp.ua/](https://constraint-automaton.pp.ua/) |  [orcid.org/0000-0003-3467-9755](https://orcid.org/0000-0003-3467-9755)

Software 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 at Ghent University. Personal projects and open-source contributions available at <https://constraint-automaton.pp.ua>.

## SKILLS

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- **Programming Languages:** TypeScript, Prolog, Rust, Python, Go, SMT-LIB, C++, Bash, SPARQL
- **Technologies:** Linux, RDF, Svelte, Vue.js, React, Docker, MongoDB, Neo4j, SolidWorks, Creo
- **Natural Languages:** French (Native), English (Fluent), Dutch (Basic)

## WORK EXPERIENCES

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**Decentralized Query Optimization Visiting Researcher** September 2025 — October 2025  
Inria *Nice, France*

Upcoming research stay funded by an [FWO scholarship](#), focused on optimizing decentralized SPARQL query execution using data publisher metadata, with implementation in the [Comunica](#) framework.

**Decentralized Database Researcher – PhD Study** September 2022 — Present  
Ghent University – Imec *Gent, Belgium*

Design and evaluate scalable solutions for querying decentralized knowledge graphs, assist in the Knowledge Graphs course, supervised master's and job students, serve on the [SEMANTICS 2025 Developers Workshop](#) committee, and contribute to the [Comunica](#) framework. Published peer-reviewed papers on decentralized knowledge graph querying with associated software implementation.

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

Developed a custom search engine to help architecture researchers retrieve relevant literature, implementing the backend in Go, the recommender system in Python, the frontend in 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** August 2018 — March 2020  
Systèmes Vireo *Sainte-Foy, Qc, Canada*

Led the development and deployment of an end-to-end IoT platform for urban agriculture at a startup, integrating embedded systems (C++, MQTT, KiCad) with full-stack web development (React, TypeScript, Node.js, MongoDB, Node-RED). Conducted on-site installation and testing, and collaborated with other departments.

## EDUCATION

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**Ghent University** 2022 — Present  
*Doctorate, Computer Science Engineering* *Gent, Belgium*

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

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