

Karl Frederick Roldan

MS Informatics student from Gdańsk University of Technology looking for hands-on experience.

Gdańsk, Poland
+48 509 829 353
karlfroldan@proton.me
github.com/karlfroldan

EXPERIENCE

Sercomm Inc — *Embedded Software Engineer*

2022 - PRESENT

- Worked on networking applications on various embedded linux platforms.
- Developed remote device management servers such as TR-069, TR-369, and gNMI.
- Developed in-company framework for containerization of applications using LXC.
- Administered self-hosted development infrastructure such as gitlab, gerrit, and jenkins servers.
- Led a team of 4 to help the development of software for a smart DOCSIS amplifier.

EDUCATION

Politechnika Gdańska, Poland— *MS Informatics*

February 2025 - Present

- Specializing in high performance systems and computational intelligence.
- **Master's Thesis (in-progress):** Analysis of the effectiveness of selected Software Defined Network controller deployment strategies to counteract attacks directed at network nodes.

Ateneo de Naga University, Philippines— *BS Computer Science*

September 2017 - June 2022

- **Bachelor's Thesis:** Multi-label algorithm classification of student submissions for an automated tutor system.

PROJECTS

Applications of Deep Learning to Steganography and Steganalysis — *Master's Team Research Project*

- Team research project with a publication requirement for my master's degree in Gdańsk University of Technology.
- Implement and find new angles in models or methodologies in steganography and steganalysis from a deep learning perspective.

SKILLS

- C and C++
- PyTorch Ecosystem
- Linux/Unix systems
- Open vSwitch
- Networking (TCP/IP)
- Rust
- Bash
- Lisp/Scheme
- Postgresql
- PL/SQL
- Camunda Platform

Relevant Courses

- Systems with Machine Learning
- Automated Business Processing
- Networking
- Network Security
- Systems Administration
- Operating Systems
- Data Structures and Algorithms
- Database Management Systems

LANGUAGES

- Filipino (native)
- English (fluent)
- German (beginner)
- Polish (beginner)