Henrique Hiram Libutti Núñez

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Experience:

- **Software Development Engineer Intern - Amazon - Madrid, Spain [Jun. - Dec. 2022]**
  - Developed e-commerce checkout improvements on customer facing experience using **Java** and **Scala**;
  - A/B test and statistical experimentation demonstrated a reduced checkout time;
  - Worked on 3 services from my team and a partner team that served over **5 million** businesses worldwide.
- **Undergraduate Researcher - LAPRAS - São Carlos, Brazil [Jan. 2020 - Dec. 2022]**
  - Research line process monitoring for Directed Energy Deposition, an advanced manufacturing process;
  - Developed multiple **ML models** using pre-trained and custom **CNNs**, for prediction of the deposition distance in the process;
  - Published a paper on a software for QA visualization of metal 3D printing processes, at **NAMRC 49 (2021)**;
  - Published a paper on using pre-trained CNNs to predict a DED variable (printing distance) at **IJAMT (2023)**.
- **Risk Analyst - São Carlos, Brazil [Sep. 2020 - Aug. 2021]**
  - Composed a team of 3 CS students and 2 attorneys to analyze the company's profile in order to implement LGPD, the Brazilian counterpart for GDPR;
  - Helped 2 companies implement their policies: one that provides invoice technology and an agricultural machine manufacturer.

Education

- **M.Sc. Robotics and Autonomous Systems [2023 - now]:** University of Turku (UTU) - Turku, Finland
- **B.Sc. Computer Science [2019 - 2023]:** Universidade de São Paulo (USP) - São Carlos, Brazil
  - **USP** was ranked as the **85th best university** in the world, and the **#1 in Latin America** (QS rank 2024).
- **Exchange Program [2022]:** Universidad Autónoma de Madrid (UAM) - Madrid, Spain
  - Master level courses in Neuroinformatics, Applied Bayesian Methods and Vision for Multiple Cameras.

Projects:

- **Lidar Assisted Navigator (LANA) [2023]:** Robot controller developed in the **Webots simulator** with **Python**, that uses a **LiDAR**, to create a map and compute an optimal route using A-star;
- **SUS System [2023]:** Distributed system built with **Docker** and **Apache Kafka** to manage medicines used by the Brazilian healthcare system (SUS). Web Interface developed in **Python/Flask** and **C#/ASP.NET**;
- **Home Gate [2021]:** IoT system with **ESP32** and **FreeRTOS**, **Mosquitto MQTT** broker, and a Telegram **Chatbot in Python** to open and close a residential gate.

Competitions

- **EY Data Challenge 2023:** Used satellite images over time to predict rice crops. **2nd place in Brazil;**
- **Pwn2Win CTF 2019:** Security challenges in a broad spectrum of areas. **Best university team in Brazil;**
- **SAE Fórmula Drone 2018:** Autonomous drone competition for high school students. **Best written report.**

Extracurricular activities

- **Student Representative [2021-2022]**: Represented students in the university collegiate.
- **Ganesh [2019 - 2021]**: Information security study group. Studied **Networks**, **Reverse Engineering** and **Hardware Hacking**.

Natural Languages: Portuguese (Native); Spanish; English.