Lucas Guilherme Hübner

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Education

Universidade Estadual do Oeste do Paraná – UNIOESTE — Foz do Iguaçu, Paraná
M.S. in Computer Science and Electrical Engineering — 2017–2020

- Thesis: "Real Time Heart Rhythm Classification Applying Embedded Technologies" Link: http://tede.unioeste.br/handle/tede/5114

Universidade Estadual do Oeste do Paraná – UNIOESTE — Foz do Iguaçu, Paraná
B.S. in Computer Science — 2013–2016

- Thesis: "Evaluation of the Performance of Communication Protocols for Internet of Things: A Case Study"

Experience

ACT Digital
Senior Embedded Systems Analyst — Jun 2022 – Today
https://actdigital.com/

External developer on TKElevator https://www.tkelevator.com/, working with Yocto, Bash, Bamboo CI, C/C++.

LEAN AUTOMATION SMART SYSTEMS S.A. – LASSE — Toledo, PR
Embedded Systems Analyst — Aug 2021 – Mar 2022
http://lasse.ind.br/

Worked with Ruby on Rails and Python to integrate solar panel data into a dashboard.

Fundação Parque Tecnológico Itaipu – FPTI — Foz do Iguaçu, PR
Systems Analyst — Aug 2018 – Jun 2021
https://www.pti.org.br/pt-br/lasse

- CBS-Com
- Development of an embedded system to communicate between the CB-Insight application and the intern boards of the Circuit Breaker Sentinel equipment.
- Modbus Collector
- Development of an modbus data collector that requests an equipment list on a WebService, read the equipment channels and send each value to a specific Kafka topic on JSON format.
- Web Platform for Visualizing Single-Line Diagram
- REACT application to see in real time events that came from a Kafka topic to a point in a single-line diagram.
- SRPPD
- Optimizing and fixing bugs on a kernel module that captures analogic and digital data from a National Instruments board.

Fundação Parque Tecnológico Itaipu – FPTI — Foz do Iguaçu, PR
Internship — Set 2016 – Jul 2018
https://www.pti.org.br/pt-br/lasse

- CBS-Com
- Development of an embedded system to communicate between the CB-Insight application and the intern boards of the Circuit Breaker Sentinel equipment.

Smart Technology For Agribusiness Care – STAC Foz do Iguaçu, PR
Partner Owner Jul 2016 – Feb 2020
https://agrostac.com.br/

- Embedded Systems Developer
- Development of circuit boards and firmware for data acquisition using ESP32, ESP8266 and Arduino with communication via WiFi and LoRa.

Instituto de Tecnologia Aplicada a Inovação – ITAI Foz do Iguaçu, PR
Internship Aug 2015 – Dec 2015
https://itai.org.br/

- RFID Authentication Module
- Development of an system to authenticate users via RFID to unlock doors. Technologies applied:
  - WebServer API: Ruby on Rails;
  - Authentication Hardware: Arduino.

Teaching

- **Teacher** at Centro Universitário União das Américas (UNIAMÉRICA) Aug 2020 – Today
  Software Engineering
  Subjects: Object Oriented Programming (Java/Python/C++/C#), Databases, SQL, Backend, Arduino and basic electronics.

  Site: https://uniamerica.br/boulevard/graduacao/engenharia-de-software
  https://uniamerica.br/boulevard/graduacao/analise-e-desenvolvimento-de-sistemas

Publications

[1] L. G. Hubner and A. Kauati, "Comparison between j48 and mlp on qrs classification through complexity measures", 2020. [Online]. Available: http://www.sbeb.org.br/site/cbeb/.

[2] L. G. Hubner, A. G. Maletzke, B. L. de Nadai, R. L. Schaefer, W. Zalewski, and C. A. Ferrero, "Fb-dt: An improvement in the brute force algorithm for motifs discovery", *IEEE Latin America Transactions*, vol. 15, no. 8, pp. 1542–1546, 2017. [Online]. Available: https://ieeexplore.ieee.org/abstract/document/7994804.

[3] L. G. Hübner, A. G. Maletzke, B. L. de Nadai, R. L. Schaefer, and J. N. Maciel, "Uma ferramenta web para a identificação de motifs em séries temporais", 2015. [Online]. Available: http://eventosunioeste.unioeste.br/index.php/eaicti/anais-do-evento.

[4] L. G. Hübner, A. G. Maletzke, B. L. de Nadai, R. L. Schaefer, and J. N. Maciel, "Strategies for optimizing the brute force algorithm for identifying motifs in time series", 2015. [Online]. Available: https://uspdigital.usp.br/siicusp/siicPublicacao.jsp?codmnu=7210.

Skills

- **Programming Languages:** C, C++, Java, Javascript, C#, Python, Ruby, Bash
- **Tools/Frameworks :** Yocto, Buildroot, QT, React, NodeJS
- **Operational Systems:** Windows, Linux
- **Platforms:** ESP8266, ESP32, Arduino
- **Text Editors:** LaTeX, Microsoft Word, OpenOffice Writer

Languages

- **Portuguese:** Native
- **English:** C2
  - **EXAM:** https://www.efset.org/cert/TVsevp

Projects

Arduino as a Tool of Automation and Teaching (2015 –2016)
A project to promote and refine theorical knowledge acquired on the Computer Science course using the programming and electronic in a practical study case related to automation, using Hardware Free platforms like Arduino.