Pedro Caldas Tammela

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**EDUCATION** 

Pontifícia Universidade Católica do Rio de Janeiro

Bachelor of Computer Science

Rio de Janeiro, Brazil Jan. 2015 – Dec. 2019

Email: pctammela@gmail.com

o Bachelor's Thesis: Scripting Linux system calls with Lua.

• Awarded: 90% Scholarship for 3 years.

• Course Emphasis: Programming languages theory and Distributed systems

Pontifícia Universidade Católica do Rio de Janeiro

Minor in Entrepreneurship

Rio de Janeiro, Brazil Jul. 2017 – Dec. 2019

EXPERIENCE

CUJO AI

Contractor

Rio de Janeiro, Brazil

Jan. 2017 - Present

• Cross architecture development: ARM, x86 and MIPS architectures.

- Lunatik: A porting project of the Lua scripting language to the Linux kernel.
- NFLua: A packet scripting engine based on Lunatik and Netfilter.
- Meta-data parsing: Protocols parser written in Lua for software interrupt processing.
- Packet meta-data analysis: Layer 3/4 meta-data analysis and real time data collection.
- Layer 3 quarantine: A layer 3 packet quarantine using skb references.
- Packet reputation: Real time packet reputation analysis with distributed communication and kernel/user-space synchronization.
- **Proof of Concepts**: Written numerous proof of concepts in Lua and C for upcoming features, researching the feasibility of the feature in an embedded platform with limited resources.

## CERTIFICATIONS

## Google Summer of Code

Rio de Janeiro, Brazil

 $Associate\ Mentor\ for\ LabLua$ 

May 2018 - Aug. 2018

- Rcu for Lunatik: A Lua binding for the kernel Rcu API. Developed by Caio Messias.
- o Socket for Lunatik: A Lua binding for the kernel Socket API. Developed by Chengzhi Tan.

## PROJECTS

- Lua LLVM Binding: A Lua binding for the C LLVM Backend.
- Lua in Kernel: Continuous development and support for kernel ports of the Lua scripting language.
- Lunatik: A port of the Lua language for the x86 Linux kernel. Originally developed by CUJO AI.
- **PoC Driver**: A driver that provides a pseudo device to run Lua scripts inside the kernel. Written for proof of concepts.
- **Personal Website**: Where I write about interesting stuff.

## Conferences

- Google Summer of Code 2018: Conference sponsored by Google for GSoC Mentors in Sunnyvale, California.
- Lua Workshop 2018 (Speaker): Conference sponsored by CUJO AI in Kaunas, Lithuania.
- Lua Workshop 2017: Conference sponsored by KONG in San Francisco, California.
- LuaConf 2017: Conference sponsored by PUC-Rio in Rio de Janeiro, Brazil.
- LuaConf 2016: Conference sponsored by PUC-Rio in Rio de Janeiro, Brazil.