



Jakob Löw

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Experience

PhD Student & Lecturer, IT-Security.	as of 10.2021
University of applied sciences Ingolstadt	
Shareholder & Software Developer.	as of 10.2020
Löw & Sailer Software UG (haftungsbeschränkt)	
Working Student Software Development.	10.2018 – 08.2021
CI Clouitem GmbH	
Google Summer of Code Student.	05.2018 – 09.2018
Google	
Tutor: Java, Operating Systems, 2x Python.	10.2016 – 02.2021
University of applied sciences Ingolstadt	

Voluntary

Students Representative in the Senate.	10.2020 – 09.2021
University of applied sciences Ingolstadt	
CTF-Team Captain, Founding member.	as of 01.2021
Neuland Ingolstadt e.V.	
Chairman.	as of 03.2018
Bürgernetzverband e.V.	
Chairman.	as of 03.2017
Bürgernetz Landkreis Pfaffenhofen e.V.	

Achievements

1st Place DawgCTF 2022.	05.2022
Global Hacking contest organized by University of Maryland Baltimore County	
2nd Place CyberSecurityDays CTF.	11.2021
Global Hacking contest organized by Ostschweizer Fachhochschule	
3rd Place HackPack CTF 2021.	04.2021
Global Hacking contest organized by North Carolina State University	
1st Place Hackathon Pfaffenhofen.	09.2020
Hackathon organized by the KUS Pfaffenhofen	
1st Place Cyber Security Challenge.	09.2018
Fiction2Science Hackathon organized by Continental AG	
1st Place THI CTF.	12.2017
Hacking contest at Technische Hochschule Ingolstadt	

Papers

Implementation of a Software Based Glitching Detection Mechanism.

Example implementation for detecting processor glitching sidechannel attacks

Software Based Glitching Detection.

Detecting processor glitching sidechannel attacks

Validating Program Correctness Using Quantum Computing.

Simulating Brainfuck programs using qiskit

Component Identification in Firmware Images.

Identification of libraries in statically linked binaries

Finding Common Compiler Options Altering Compilation Output.

Published in the proceedings of ARC.THI 2020 Conference

Side Channel Attacks on Disk Encryption.

Bachelor Thesis: Cold boot, PCIe DMA attacks and AES key recovery

Register allocation in JIT compilers.

Paper covering graph colouring based register allocation

Open Source

neuland.app.

API reverse engineering & implementation of a more secure app

JavaScript

DocGreenESA5000 Dashboard.

Protocol reversing & dashboard PCB for the e-Scooter sold by Lidl

C

DJITelloPy.

Python library for controlling DJI Tello drones

Python

libregexjit.

Library for JIT-compiled regular expressions

Yacc, Lex & C

Haskell Alpha.

Equation solver

Haskell

GNU libjit.

JIT compilation library

C

Eggbot Software.

Software for an easter egg painting robot

JavaScript & C++

PointerScript.

Scripting Language

C

Education

PhD Student, IT-Security.

University of applied sciences Ingolstadt

as of 10.2021

Master Applied Research in Engineering Sciences.

University of applied sciences Ingolstadt

2019 – 2022

Bachelor Computer Science.

University of applied sciences Ingolstadt

2015 – 2019

Languages

● German – Mother tongue

● English – B2, fluent

● Latin – Latinum

● Spanish – B1