

Nicolas Badoux

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Grand-Rue 8
1315 La Sarraz
CH - Switzerland
Swiss citizen
Born 06.11.1994

EDUCATION	École Polytechnique Fédérale de Lausanne (EPFL) - Switzerland	2020-ongoing
	PhD student in Computer Science in the Hexhive group	
	Under supervision from Prof. Mathias Payer	
	Eidgenössische Technische Hochschule Zürich (ETHZ) - Switzerland	2016-2019
	Master of Science ETH in Computer Science	
	Specialization in Information Security	
	École Polytechnique Fédérale de Lausanne (EPFL) - Switzerland	2013-2016
	Bachelor in Communication Sciences, GPA: 5.26 / 6	
	Carnegie Mellon University (CMU) - Pittsburgh PA, USA	2015-2016
	Two semester exchange program	

WORK EXPERIENCE	Fondation Digger , NGO - Software Engineer - Tavannes, CH	Aug 2019 - March 2020
	- Development of an virtual overlay for a video stream to be stream in VR for demining work.	
	- Extensive use of OpenCV and Unity in an Agile environment for my mandatory civil Service	
	chainSolutions - Blockchain Consultant - Zürich, CH	Jan' - June 2018 @ 20%
	- Undertook the conception of the technical foundations for different clients project.	
	- Designed part of a global self-sovereign identity management system.	
	Compassion Suisse , NGO - Software Engineer - Yverdon, CH	Mar' - May 2018
	- Contributed to opensource modules for the Odoo ERP. Written in Python in an Agile team as part of my mandatory Swiss civil Service	
	Ergon Informatik - Security Engineer Intern - Zürich, CH	Sept' 2017 - Mar' 2018 @ 60%
	- Development in Python of a blackbox fuzzer to improve security of Ergon Web Application Firewall, Airlock.	
	- Use of Radamsa to generate malformed HTTP multipart requests resulting in the correction of multiple logic bugs.	
	Morgan Stanley - Technology Summer Analyst - London, UK	June - Aug' 2016
	- Developed customizable charts providing visualization of the statistics of the Architecture Security team.	
	- Identified the important charts and use cases. Implemented charts in AngularJS with a Java EE backend.	

RELEVANT COURSES	Security of Wireless Network	System Security
	Network Security	Applied Security Lab
	Introduction to Machine Learning	Advanced Computer Networks

SKILLS **Programming Languages:** Python, LLVM, Java, Matlab, Solidity, \LaTeX
Spoken Languages: French (native), English, Swiss-German, German

PROJECTS	MinFuzz: Program simplification to drive fuzzing effectiveness , EPFL	Winter 2018
	- Development of automatic code pruning targeting checksum, decryption, and decompression functions to maximize number of execution and code coverage exercised.	
	- Resulting in a 50% speed up of targeted binaries and coverage up to 20% higher than AFL.	
	- 6 months Master Thesis written in Python under the supervision of Prof. Mathias Payer	
	Bloomberg New York Security Challenge , New York, USA	June 2018
	- As a winner of ETH Codecon, participated in a week-long project at Bloomberg CTO Office, analyzing network traces of microservices for security anomalies.	
	RingCT in an Ethereum smart contract , ETHZ	Mar' - Sept' 2017
	- Implemented in Solidity a smart contract executing Monero-like confidential transactions.	
	- Part of an introduction to Research under the supervision of Prof. Arthur Gervais.	

ACTIVITIES	Winter Camp Leader - Grimentz, CH	2014 & 2017
	Camp with 110 teenagers/young adults during a week. Built a team, prepared the event, managed the team and was in charge of the authority during the week.	