

Alexandre Macabies

Software & Web Engineering, Security, System Administration

37 rue Ampère
38000 Grenoble, France
☎ (+33) 6 82 66 29 67
✉ alex@macabies.fr
📧 alex.macabies.fr
🚗 Driving licence

Experience

Business

- Nov 2015 - now **Python, C++ development for security tooling: fuzzing and side-channel analysis**, CEA, Grenoble, France.
Developped hardware security related tools in Python, C++, including network protocol fuzzing and side-channel analysis. Designed a framework for automated scope acquisition, high-precision probe positioning, waveform storage and distributed processing. Developped a C++/Qt GUI targeting side-channel analysis tasks. Partially reverse-engineered bootloaders. Contributed to the Linux kernel.
- Feb 2015 - Aug 2015 **Python development for industrial network monitoring**, CEA, Bordeaux, France.
6 month internship
Developed a passive, security-oriented network traffic analyzer, with specificities for industrial systems.
- Jun 2014 - Sep 2014 **Java and web development, sysadmin**, RedBite Solutions Ltd., Cambridge, UK.
4 month internship
Designed a RESTful API in Java with Spring and CouchBase. Developed a Java backend for a mobile application using Couchbase Sync Gateway. Implemented new frontend features using Vaadin.
- Jun 2013 - Aug 2013 **PHP and Python development, sysadmin**, Sensaris, France.
2 month internship
Developed the web backend and frontend for an IoT platform with Paypal integration and invoicing system. Created a stress-testing Python software and designed 3D-printed plastic enclosures.
- Jul 2012 - Aug 2012 **Python development (XMPP), sysadmin**, Alwaysdata, France.
Worked on internal tools (including Jabber bots) for teamwork coordination and developed an automatic screenshot service for the company documentation system.

Community and Personal projects

- 2013 - now **Prologin contest organizer**, French national programming contest, prologin.org.
Organizer of the contest since 2014, technical team. Work on web front-ends, infrastructure and systems administration. Please refer to our [open-source projects](#).
- Mar 2013 - 2014 **Python and PHP development, sysadmin**, scholar association *Eirbware*, eirb.fr.
Designed a set of various web services for students, including realtime games, time tables and document repositories with centralized authentication.
- 2008 - now **Various open-source projects**.
Please refer to my public profiles on [BitBucket](#) and [GitHub](#).
Some projects I was involved in: py-gfm (Markdown parsing), identipic (C++/Qt app), django-hijack (Django module), zinnia (Django CMS), weechat-android (IRC client).

Skills

Computer Technologies

Programming	Python, C++, Java, C, PHP, JavaScript	Frameworks	Qt, Django, SQLAlchemy, Android, Asterisk PBX
Systems	GNU/Linux, Windows	Tools	VCS (incl. git), shell scripting, Vim, CMake, gdb, Hex-Rays/IDA
Computer graphics	Responsive Web design, 3D modeling	Miscellaneous	Basic cryptography

Languages

English	Fluent (IELTS: 7.5/9, TOEIC: 980)	French	Native speaker
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Higher education and diplomas

- 2012-2015 **ENSEIRB-MATMECA**, Bordeaux.
Graduate School of Engineering in Computer Science, 5-year engineering degree.
- 2010 - 2012 **2-year Maths & Physics course preparing for French engineering schools**, Grenoble.
- 2010 **Baccalauréat S, equiv. to High School Diploma in sciences**, with *distinction*, Grenoble.

Interests

- Voluntary work President of my school's computing club. IT support, lectures and trainings. eirbware.fr
Active member of the Prologin association. prologin.org
- Contests and CTFs Prologin 2013, Google Paris Hash Code 2014, GreHack CTF 201{5,6,7}.
- Music Practicing the piano (for 7 years), the guitar (for 3 years) and Computer-aided Music Creation.
- Sports Play tennis, volley-ball and go skiing, hiking on a regular basis.