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**Mael Abgrall**  
**Software engineer + Msc. AI**  
**Interested in discovering new things !**

  
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For more detail and complete list of skills projects, etc, please check my website on <https://maelabgrall.github.io/>

## Studies/Diploma:

2018 – 2019 (1 Year)	MSc. Artificial intelligence – Heriot Watt University (UK) (Artificial Intelligence, Biologically inspired computation, 3D graphics, Data mining & machine learning)
2013 – 2018 (5 Years)	Master of engineering (equivalent to master 2) - ESME Sudria, (France) engineering school of electronics and informatics. Specialisation computer science ( <b>image processing, virtual &amp; augmented reality, big data</b> , etc) (full course list available on my website)
2016 (6 Months)	Exchange program – Vidzeme University of Applied Sciences (Latvia)

## Skills:

**My main language is Python followed by C++, and I'm interested in learning Rust**

Python	C / C++	Windows (daily usage)
Java / JEE	DB & Queries (SQL & NoSQL)	Linux (daily usage of Fedora)
C# / ASP.NET	JavaScript / NodeJS	Git / vsCode / Nano

*I have also an average math & electronic level*

## Working experience:

2018 (5 Months)	<b>Research intern in Artificial intelligence</b> School of Mines ParisTech (Mathematical morphology) (Paris, <b>France</b> ) <ul style="list-style-type: none"><li>- Neural network security (Adversarial examples)</li><li>- Active learning for deep neural networks in image segmentation</li></ul>
2017 (3 Months)	Internship in <b>Business Intelligence &amp; Web development</b> IT-CE (Paris, <b>France</b> ) Development of monitoring tools for software architects, & a smart-wiki website based on word documents ( <b>MSSQL, PowerBi, ASP.NET</b> )
2016 (1 Month)	Internship in the IT department of a hospital Centre Hospitalier Princesse Grace ( <b>Monaco</b> ) Development a software with <b>NAO</b> to interact with old people with disabilities
2014 – 2016 (multiple mission)	Science educator (UAV & drones) - OSI (Objectif Science International) NGO Multiple locations in <b>France and Switzerland</b> .

## Personal involvement

2016 – 2017 (1 year)	President in two students' art club Bureau Des Arts ESME Lyon & Bureau Des Arts ESME Paris
2015 - 2016 (7 months)	
2010 – present (8 years)	Amateur photographer Mab Photography (Meuuul) Creation of a photography blog & voluntary work in photography

## Latest projects / school work:

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|--|---|
| 2018 – 2018<br>(coursework)            | <ul style="list-style-type: none"><li>- Creating a 3D scene using OpenGL (C++, OpenGL)</li><li>- Naïve implementation of a perceptron (Python)</li><li>- Naïve implementation a of genetic algorithm and particle swarm optimization using multiple benchmark functions (Python)</li><li>- Analysis of multiple query type for active learning (Python)</li><li>- Reinforcement learning &amp; Markov decision process on a tic-tac-toe (Java)</li></ul>                              |
| 2017 - 2018<br>(6 Months)              | Image segmentation for medical use. ( <b>Python, OpenCV</b> )   |
| 2017 (6 Months)                        | Making a voice Recognition software with Deep Learning techniques ( <b>C++, no library used</b> )   |
| 2017 (6 Months)                        | Making a procedurally generated map for a game ( <b>C++, Qt</b> ).  |
| 2016 (6 Months)                        | Creation of a basic image editor using multithreading ( <b>C++, Qt</b> )  |
| 2016 - 2017 (practical work in school) | <ul style="list-style-type: none"><li>- Image processing in Matlab</li><li>- Data compression algorithms</li><li>- Creation &amp; edition of database in SQL, NoSQL &amp; basics of Hadoop MapReduce</li><li>- Creation of web app in Angular 2+</li><li>- Creation of a IRC chat (NodeJS)</li><li>- Various OOP oriented practical work (Python, Java, NodeJS)</li><li>- Simulation of a digital clock in VHDL</li><li>- Creation of a basic program using an 8bit PIC (C)</li></ul> |

## Languages:

- French (native)
- English (TOEIC 915 / IELTS 6.5, daily usage)
- Spanish (basic level)

## Hobbies:

- Many international travels with friends or alone (Europe, America, Africa, Oceania).
- Many individual & team sports
- From 2005 to 2013, regular competitions (mainly in ATV, skiing and swimming).
- New technologies
- Music & Cinema