

# Mattijs Korpershoek

*Embedded Linux/Android software engineer*

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 [Makohoek](https://github.com/Makohoek)

Born: 01/11/1990

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## Education

- 2013 – 2014 **5<sup>th</sup> year computer science: Master degree CAMSI (Informatics, Systems and Machine Architecture Conception, Paul Sabatier University(UPS) (Shanghai rank: 201-300), Toulouse, rang 1/18.**  
with honours: score > 85%
- 2012 – 2013 **4<sup>th</sup> year computer science: CAMSI, UPS, Toulouse, rank: 1/6.**  
with honours: score > 75%
- 2011 – 2012 **3<sup>th</sup> year fundamental computer science: Bachelor degree, UPS, Toulouse, rank: 4/76.**  
with honours: score > 75%
- 2010 – 2011 **2<sup>nd</sup> year fundamental computer science, UPS, Toulouse, rank: 7/67.**  
with honours: score > 75%
- 2009 – 2010 **1<sup>st</sup> year fundamental science, UPS, Toulouse.**
- 2008 – 2009 **French Baccalauréat of science, Lycée Léo Ferré, Gourdon.**

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## Experience

- 01/02/2017 – **Linux/Android R&D for Intel New Device Group, CELAD, San Francisco Bay**  
present Area, USA.
- Android/Linux drivers, Android Framework / HALs
  - Production line support, system debugging, hardware bring-ups
  - C, C++, Java, Git, Python, XML, Bash, Android build system
  - Emacs, Vim, tmux, bash, awesome WM
- 01/02/2015 – **Linux/Android R&D for Intel New Device Group, CELAD, Toulouse, France.**  
31/01/2017
- Android/Linux drivers (ASoC framework)
  - Android audio HAL, communication with AudioFlinger/AudioPolicy
  - C, C++, Git, Python, XML, Bash, Android build system
  - Vim, tmux, bash, awesome WM
- 15/09/2014 – **Linux/Android R&D for Intel Audio team, CELAD, Toulouse, France.**  
31/01/2015
- Android/Linux drivers and HAL
  - DSP firmware
  - C, C++, Git, Python, Bash, XML, Android build system
  - Vim, tmux, bash, awesome
- 03/04/2014 – **Internship: software developer focused on middleware/opensourcing, CELAD,**  
29/08/2014 Toulouse, France.
- Linux, Android middleware and audio HAL
  - Agile software development (scrum)
  - Pair programming, Test Driven Development
  - Git, GitHub, C++, Python, Bash

- 06/05/2013 – **Internship: embedded and web development**, *24green at Hoogendoorn*, Vlaardingen, 09/08/2013 The Netherlands.
- Implemented Web API working with their product: 24aqua
  - Web+Android applications to illustrate that API
  - Add new controls to 24aqua and extended API to support it
  - Automatic configuration scripts for 24aqua
  - Microsoft .NET framework, C#, HTML, SQL, MVC 4.5
  - Agile working (scrum), Test Driven Development
- 16/04/2012 – **Internship: kernel development**, *IRIT in team SEPIA*, UPS Toulouse, France.
- 13/07/2012
- Governor (DVFS) for the GNU/Linux kernel
  - Research about memory allocation
  - Energy optimisation via software
  - Kernel/System programming in C
  - Bash scripts for testing benchmarks
  - Wide scale testing on Grid'5000, a french research grid computing network
  - Documentation and tutorials in L<sup>A</sup>T<sub>E</sub>X
- 08/01/2013 – **Project: computer graphics**, *Implementation of 2 real-time anti-aliasing algorithms*, 26/04/2013 UPS Toulouse, France.
- Post-processing algorithms
  - Implemented in an existing 3D engine: VortexEngine
  - Enhanced Sub-pixel Morphological Anti-Aliasing (SMAA)
  - Joint Bilateral Up-sampling (JBU)
  - Written in C++ with OpenGL, GLSL on QtCreator
  - State-of-art about anti-aliasing algorithms
  - Based on a research of 15 papers from various authors from the scene
- 10/02/2013 – **Project: distributed computing**, *Implementation of a DHT based on the Chord algorithm*, 20/04/2013 UPS Toulouse, France.
- Distributed Hash Table: one node of the network can handle multiple keys of the table
  - Peer 2 Peer algorithm, optimized for the least network usage
  - Written in Java with RMI on Eclipse
- 08/10/2012 – **Project: TCP/IP networks**, *Created a P2P file sharing system*, 15/01/2013 UPS Toulouse, France.
- TCP/IP, socket programming in Java.
  - File splitting in multiple blocks which are send via the network and shared by the users
  - Multi-threaded client with multiple parallel downloads
  - Support for continuing paused downloads, even multiple hours after pausing
  - Written in Java with Sockets only on Eclipse
- 01/10/2012 – **Project: Multimedia**, *Audio/Video player with GStreamer*, 28/10/2012 UPS Toulouse, France.
- Multi-format audio/video player
  - Can play the video in ascii art
  - Command line options to alter video signal such as: contrast, gamma correction
  - Written in C with GStreamer library on Vim

## Technical skills

Imperative	C, GLSL*, CUDA	Script	Bash, Python*, Powershell*, Matlab
Object oriented	C++, Java, C#	Declarative	SQL, Prolog
Web	jQuery, HTML5, CSS3	Mobile	Android, jQuery Mobile
Functional	OCaml	APIs	Google Calendar*, OpenGL
Conception	Design Patterns, UML	Organisation	Agile working, Pair Programming, TDD

System	VHDL, ARM assembly, POSIX threads and memory sharing, process scheduling, cache algorithms, RISC pipeline techniques	Networking	C and Java sockets, RMI(Java), TCP/IP, CAN
OS	Linux(Debian), Windows	Office	LaTeX, Office, Google docs
IDEs	Emacs, Vim, Visual Studio, WebStorm, Eclipse, QtCreator, IntelliJIDEA	Tools	git, svn, tfs, sharepoint
(*)	self learned		

## Languages

Dutch	<b>bilingual</b>	<i>mother tongue</i>
French	<b>bilingual</b>	<i>living in France since 2000</i>
English	<b>fluent</b>	<i>reading often, watching TV series and films in English, presentations</i>
German	<b>4 years experience</b>	<i>2 student exchanges from 2 weeks each and learned at school</i>

## Hobbies

Music	Playing acoustic guitar since 2007
Sport	Climbing (indoors) twice a week since 2014