



# Mikael Lavi

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**Date of Birth** 06<sup>th</sup> August 1983  
**Nationality** Finnish  
**Languages** Finnish, English

## Education

**Aalto University / Master of Science**  
2002 – 2012

Major in Media technology, minor in Usability.

**Aalto University / Bachelor of Science**  
2002 – 2010

Major in Media technology.

## Interests

My specialization and interest is in 3D technologies and how to apply that to the built environment. My interest towards the built environment has developed after being involved with it for many years. I got interested in usability and consistency of user interaction through my work with interactive viewers. Interactivity is not something that is always intuitive, and sometimes it is the counter-intuitive solutions that solve the problems. Less is often more.

My other technological topics include machine vision and image processing. I have a large knowledge of tools available and good skills to locate what I need. I have experience in researching scientific material to attain knowledge and to apply that in solutions.

In my projects I have engaged heavily in shared documentation practices in collaborative platforms like Google Docs. It is vital to have an interactive access to information and build structures into it that cross-link it to knowledge. Wikis are good, but they lack the immediacy of a collaborative document that can be edited at the same time.



# Competences

My main operating system nowadays is Windows. I have worked on a daily basis with OS X and Linux as well. My preference now is convenience and readily available toolsets. Visual Studio Code is my favorite editor now.

My thesis work was a study on the usability of the touch interface in the general case of a 3D viewer. The implementation part was done for Tekla BIMsight. This work involved a lot of optimization for the performance as there was significant bottlenecks that hindered the fluent experience we were after. Similar tasks have come my way during the years and narrowing down the solution for such problems is familiar to me.

I am equally at home with designing and developing back-end services as I am with front-end development. I have experience on working with full-stack development and deploying solutions to cloud as well. I believe that a right tool for the job is a must. My current skills include Javascript toolchains, Nuxt and Vue frameworks, Node.js environment hosted in different cloud service providers with native C++ code embedded in the environment as well. All of these are bundled with heavy focus on machine vision and AI development. My education for programming has consisted from a discipline that values problem solving over a specific language.

I have programmed in .NET for 10 years as it has developed from a rather niche toolchain to a very powerful platform. I have experience in developing interoperability components for the mobile platform in Xamarin to crossbreed technological components to a new application. Fluent operation of the end product was always a design requirement on the projects.

My latest interests are in cloud computing and concurrency on planet scale where possible. This demands splitting tasks to small enough items that it becomes sensible to run them in parallel on the cloud. This has lead to interesting explorations in WebAssembly and JavaScript codes that explore utilizing more powerful computing capabilities of GPUs on the cloud.

Skills	Grade	Skills	Grade	Skills	Grade
C#	5	C++	3	Vue.js	5
JavaScript	5	Python	3	Nuxt.js	5
TypeScript	3	.NET	4	Node.js	5
Git	4	WPF	4	Google Cloud	3
HTML	5	Firebase	4	Bash	2
CSS/SASS	4	Azure	4	Google Docs	5



# Work Experience

## Presenting opportunities

2018

As the CEO of a tech start-up I've been called on occasions to present myself and the company and I have taken the opportunities to learn and hone my skills in presenting. Here are a few of the latest opportunities.

[EIT Climate KIC, Mission Finance](#), Dublin, November 2018. This session was the European climate change summit targeting financial sector specifically called Climate KIC Mission Finance. I was called on short notice by the Helsinki based Smart&Clean foundation to represent on their invitation to present their PPPP model that they are working on in Helsinki. I was part of a panel comprising of companies such as Ramirent, Shareit.global Oy, and Helsinki city as Forum Virium.

[Kiradigi 360 session](#), 'Digital construction', April 2018, Ministry of transport and communications, Helsinki. This was the third result session from Kiradigi project and I was invited to participate in the panel discussing the participants in the experiments that Kiradigi project entails. In this session there were influential construction companies present such as Bonava, Sweco, Destia and Lehto. The session is viewable online.

## Wanderfeel Oy / CEO, co-founder

2016 – current

I was a co-founder to this company. We are a passionate team of engineers and architects tackling the most ambitious problems in AEC (Architecture, Engineering, and Construction). I created a web application for visually inspecting virtual BIM models with real observations captured on site with video.

My other main tasks have been about developing the company and finding funding for it. I have been heavily involved with customer discussions in discovering the pain points they have and providing technical solutions to them.

My current skills include tools and utilities regarding to my work with Wanderfeel. We are utilizing Javascript toolchains, Nuxt and Vue frameworks, Node.js environment hosted in different cloud service providers. All of these are bundled with heavy focus on machine vision and intelligence.

## Trimble Navigation / Software Architect

2014 – 2016

This position allowed me to shift my focus as a software architect to concentrate being the technical lead on specific projects. My responsibilities in addition to architectural design included setting up the project from technical perspective, and give guidance and



education in technical aspects to co-located teams.

My last specialty project in this space involved interoperability for 3D components in mobile tools maintained in Xamarin. This has carried forward in my latest experiences.

## **Tekla Oyj / Software Engineer**

2005 – 2013

As a software developer in Tekla I was a founding member in the new free product being launched in 2010 called Tekla BIMsight. My role became a trainer along with the other founding member of the team, as we had to get others to become productive members developing the product. It was a very fruitful endeavour to work with so many interesting people, and my position evolved as an expert throughout the project. I've learned significantly more about architecture design through how we reconstructed different parts of the software.

Especially I feel that working on information modelling on the project has been very interesting and that developing the way information is consumed should be more democratised in many ways. This project on my behalf helped me get closer to that goal.

## **Uplause Ltd / Project course work**

Mar – May 2011

During the course we had to evaluate a user interface, give a proposal for improvements and have a presentation both at the course and company. This included evaluation of the existing UI against guidelines, doing user testing on the UI, planning the tests, analyzing findings, creating new concepts that solve found problems and reporting findings.

## **Tietokilta ry / Company relationship executive**

2006

As a member of the executive board in the students association for computer science students, my task was to maintain relationship to companies, make new contacts and uphold the cooperation with the partners and other student unions in Otaniemi and Helsinki. This was voluntary work where I was required to use communication skills, find information, come up with new ideas how companies and students could interact.

