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Please find an interactive version of this document online at janpaulposma.nl/cv.

Curriculum Vitae: Jan Paul Posma

Oxford-graduated computer scientist with a broad range of interests. Implementing impactful ideas. Current focus: revitalising democracy.

I've written production code in **15 languages**, taught programming and engineering for **8 years**, made **3 legacy code bases** maintainable again, wrote **~6000 lines of pure compiler code** to make new UIs possible, signed up **1000s new users per month** for unadvertised years-old independent products, and once used **25 wine glasses** in a project for MTV.

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Professional experience

Brigade (web developer)
2015 – present

We are **tackling** the problem of declining **citizen power and engagement in American democracy**. The company, which raised $9.5 million from investors led by Sean Parker, Marc Benioff, and Ron Conway, is building tools for expressing your civic identity, learning about your friends and neighbours, and working toward common goals together.

I'm working on the web application, where I mainly focus on features for **customer growth**; several of my proposals and implementations have significantly increased our rate of acquisition. I introduced **engineering practices** that keep the complexity of our application contained, and I created a system for managing, visualising, and testing **analytics events** and **experiments**. Sometimes my work results in open source projects, such as a **polyfill for delayed scroll restoration**.
brigade.com, github.com/brigade/delayed-scroll-restoration-polyfill

Versal (web developer)
2013 – 2015

I worked on the **core product**: an **authoring tool for interactive courses**, built from the belief that we are vastly underutilising the computer's potential in education. Based on lessons learned, I co-authored a new API for "gadgets" — building blocks of courses, such as videos, quizzes, simulations, games, and so on. We launched our development platform with this new API, and it was well received by gadget developers (much of the API has been **released as open source**). I also **mentored** several junior engineers, **spoke at industry events**, and advised on **systems architecture and product design**.
versal.com, github.com/Versal

Factlink (web developer)
2012 – 2014

We built an **open source tool** for **curbing misinformation** on the web. I worked on getting traction and applying good engineering practices. We did not manage to get substantial traction, but applied the lessons learned to a spin-off company, **HackerOne**, which was funded by Benchmark Capital for $9 million in May 2014. In 2015 I adapted some of the code for the open source project **Annotator.js**.
factlink.com, hackerone.com, github.com/Factlink/annotator-paragraph-icons

Wikimedia Foundation (web developer)
2011

I worked in the **features team**, developing new tools for **Wikipedia** and other sites running **MediaWiki**. I mainly worked on **WikiLove**, a feature that got major **media coverage**. I was also involved in the discussion about building a new parser, a **major project** which enables developers to build a visual editor in the future.
wikimediafoundation.org, wikipedia.org, mediawiki.org, http://news.google.com/?q=wikilove, http://www.mediawiki.org/wiki/Future

University of Groningen (teaching assistant)
2010 – 2011

As a teaching assistant for **Computing Science**, I taught practical sessions, wrote teaching materials, and reviewed and graded submitted work.
rug.nl

WorldTicketShop (web developer) 2009 – 2010

I was one of the first hires to work on the new **marketplace**. Although working only part-time for most of the time, I built large parts of the **critical infrastructure** of the site, made sure the **transition** between the old and the new site went well, did some of the dynamic parts of the **front-end** and was in charge of the **performance**.
worldticketshop.com

Cantouch (multitouch developer intern) summer of 2009

I worked on a large **multi-touch table** that supported many touches at the same time, allowing for multi-user interactions. I built two **promotional applications** for Technische Unie, a Dutch wholesale business.
youtu.be/3163Llr5qBs

Triati (web developer) 2008 – 2009

I first **worked** on seoAssistant, a **web application** to monitor performance of websites in search engines. Then I built sportCMS, a website system for **small communities**, such as sport clubs.
triati.com

Aerotronic (web developer) 2006 – 2007

I worked on the Aerotronic **webshop**, which primarily sells remote-controlled helicopters. I improved the user experience and developed new modules.
aerotronic.nl

Contact information for references can be supplied upon request.

Education

MSc in Computer Science, University of Oxford 2011 – 2012

I studied and lived at **St Hugh's College**, where I was a committee member for the **Middle Common Room**. My final project was **JavaScript dares**, an **interactive online programming course** aimed at high school students, for which the thesis can be found **online**. It featured a carefully crafted set of **puzzles** based on the LOGO turtle and Karel the Robot, and a custom subset implementation of Javascript called **js--** to make **time-travel debugging and visualisation of execution** possible.
ox.ac.uk, mcr.st-hughs.ox.ac.uk, jsdares.com

BSc in Computing Science (cum laude), University of Groningen 2008 – 2011

I completed the **Computing Science bachelor** with distinction, **cum laude**. It included a 6-month minor in **Mathematics**. I also did committee work for **Cover** and **FMF**, two student associations.

For my bachelor thesis I researched new ways of **editing wikis** such as **Wikipedia**. In October 2010 I presented preliminary results at the MediaWiki Hack-A-Ton in Washington D.C. on invitation of the **Wikimedia Foundation**. In 2011 development continued in close collaboration with developers of **GRNET**, a Greek government-funded research institute. We presented this work at a gathering in Berlin in May 2011. The final thesis received a mark of **9.5** (out of 10), and can be found **online**.
rug.nl, svcover.nl, fmf.nl, wikipedia.org, wikimediafoundation.org, grnet.gr, http://commons.wikimedia.org/wiki/File:In-line_Editing_thesis.pdf

Willem Lodewijk Gymnasium, Groningen 2002 – 2008

I followed the track **Nature and Technology**, which focuses on exact sciences. Besides the main courses and the courses from this track, I studied **economics** and **ancient Greek**. My graduation project was **PimpMyBike**, an electronic circuit placed in the wheel of a bike, which displays an image when driving. Finally, I maintained the school's **website**.
wlg.nl, janpaulposma.nl/pimpmybike

Experience, prizes, and awards

Vote16SF 2015

With Jared Shay and the Vote16SF teenagers
For the **Generation Citizen Civic Tech Challenge 2015** a fellow programmer and I teamed up with a group that advocates for a lower voting age. In one day we put together a **website** that tells San Francisco voters why lowering the voting age is a good idea, and concrete steps they can take to help. Our team won the competition's **Civic Alignment Prize**.
civictechchallenge.org, vote16sf.org

Visualising Program Execution 2015

Based on my work on **jsdares** and research into debugging tools, I developed prototypes for new ways of **gathering and visualising execution traces** of programs. I presented my findings at a few conferences: ForwardJS, OSCON, and Strange Loop. After that, I released the **final prototype**, which I actually used in our production codebase at Brigade.
jsdares.com, janpaulposma.nl/visualising-program-execution, github.com/janpaul123/omniscient-debugging

λ Lessons 2014

With Steve Krouse

In this hackathon hosted by Y Combinator we created **λ Lessons**, an **open source Haskell course**. For this we implemented a **custom Haskell parser** and **interactive visualisation** of functional expansion and reduction. Our work generated significant interest in the web development and functional programming community — even a spin-off was made, the very entertaining **λ Bubble Pop**.

stevekrouse.github.io/hs.js, chrisuehlinger.com/LambdaBubblePop

Vriendenpolitiek 2012

In the run up to the Dutch national elections I built an **interactive website** that shows exactly how much the **different parties agree with each other** when voting on bills. This application led to an invitation to the first **hackathon** ever to be held in a House of Representatives.

vriendenpolitiek.nl, appsvoordemocratie.nl

Fronteers conference (volunteer) 2009, 2012

I volunteered in organizing the **Fronteers conference** about front-end web development.

fronteers.nl/congres

Varsity Coding Contest 2011

In this programming competition I secured the **5th place** within Oxford University.

Apps for Noord-Holland 2011

For this **open data competition** I built a **website** with practical information about open swimming water, such facilities, health warnings, and so on. It won the **golden prize** in the category Tourism and Culture.

janpaulposma.nl/zwemmeninnoordholland

Huygens Scholarship 2011

The **Huygens Scholarship Programme** awarded me a full scholarship to finance my studies in **Oxford**.

Science Center North (volunteer) 2008 – 2011

As an unpaid volunteer, I worked at **SCN** with children (age 10–18) on **electronics** and **programming** projects. I taught about soldering, (embedded) programming, and the drawing of schematics and circuit boards. I also developed a set of example projects. We built **oscilloscope games**, **robots**, **aquarium discos**, and **alarm clocks** that played the Super Mario and Tetris themes.

stichting-scn.nl

IKEA (project manager for student development project) 2010

I participated in an **international software engineering project**, coordinated by the university, to develop an internal webapplication for **IKEA**. This was done in cooperation with students from the **Linnaeus University** in Växjö. I was the **project manager** of a team of 11 students.

ikea.com, lnu.se

IWI programming contest 2009, 2010

With Roan Kattouw

In this university contest we secured the **1st place** as a junior team in 2009.

With Roan Kattouw and Herbert Kruitbosch

In 2010 we competed in the senior league, and got the **2nd place**.

Audivididici 2007 – 2009

With Simon Roosjen

In high school I developed a program for **learning languages** by adding pictures and sound, a method rooted in pedagogical theory. I developed this with my classical languages teacher, who used it successfully in class using (collaborative) exercises. We were awarded funding from **Kennisnet Grassroots**. The program is also featured in a **video** about innovation about education (in Dutch). There is still a group of teachers who actively use our tool in class.

audivididici.nl, grassroots.nl, leraar24.nl/video/409

Benelux Algorithm Programming Contest 2009

With Roan Kattouw and Herbert Kruitbosch

In this national contest we secured the **10th place** nationally, and the **1st place** within our university.

Young Talent award 2009

The Royal Holland Society of Sciences and Humanities awarded me a **Young Talent** award.

National Informatics Olympiad 2007, 2008

This competition is aimed at solving algorithmic problems and implementing them. In the national rounds I secured a **5th place** in 2007 and **7th place** in 2008.

RoboChallenge Junior

2006, 2007

With Marc van Beest

The aim of this national competition was to build a robot that is able to navigate on a grid and perform certain tasks. Our robot won the **1st place** in 2006, and the **3rd place** in 2007.

Various open source projects

I developed parts of **usbpicprog**, an open source, open hardware project, consisting of a **hardware device** and a piece of **cross-platform C++ software**.

I founded **OpenLaserFrag**, an open source, open hardware **laser-tag game**. I built the original hardware and software, which is now being built on without my involvement.

I wrote the initial Sublime Text port of **import-js**, a tool for making working with Javascript dependencies easier.

On my **GitHub** page there are some more projects I started or contributed to.

usbpicprog.org, openlaserfrag.org, github.com/janpaul123

Other activities include **photography**, playing the **piano**, and the occasional **skiing** and **sailing**. I enjoy building **interesting things**, such as a **computer in a briefcase**, **balloon molecules**, **self-enumerating pangrams**, or a **voice-controlled apartment**. For more information on my personal interests, please visit my website: **janpaulposma.nl**.