

Joel Purra

CV/résumé – check online for the latest version

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The ace up your sleeve

I do remote freelance software development consulting. Adding new features, refactoring old systems, building entire greenfield projects/MVPs from scratch. Primarily short-term contracts (0-3 months with option to extend), optionally part-time (8-40 hours per week), only working remotely. Subcontracting accepted.

Hands-on software development in the entire stack as well as code reviews, designing system architecture, and being an interim CTO. Emphasis on quality code with tests. With a wide range of skills and experience, I enjoy being the go-to guy for technology/security/architecture/product questions. Working full-stack, but prefer backend over frontend.

Grew up in an entrepreneurial family and have been running IT businesses since 1998. Co-founded several e-commerce sites, built tools for the government, done internet/security research, released dozens of open source projects, advised developers and startups. Have a master's degree in information technology and engineering, army officers' training, traveled the world with my backpack, lived in several countries. Prefer to have a flexible lifestyle; am currently a freelance contractor/consultant. Message me.

Location Berlin, Germany (but am working remote only)

Nationality Swedish (implicit EU work permit, invoicing from Germany)

Experience

The below experience list excludes several positions, intermediary consultancy firms and links. Additional positions/entries and details are available on my LinkedIn profile page: joelpurra.com/cv

Consultant (International)

January 2010 – present

I do remote freelance software development consulting. Adding new features, refactoring old systems, building entire greenfield projects and MVPs from scratch. Primarily short-term contracts (0-3 months with option to extend), optionally part-time (8-40 hours per week), mostly working remotely. Subcontracting accepted.

Focused on open source (based) software development. Specialist/senior engineer in web technologies (full stack; preferably backend) and backends for any other systems. Can work with technical product development, lead teams, and coach junior developers. Ready to dive into AI, machine learning, IoT, blockchain, etcetera.

Senior Backend Software Engineer, vestr AG

June 2018 – November 2018 · Remote

Swiss fintech startup improving the workflow of Actively Managed Certificates (AMC) for banks, portfolio managers, and their investors -- a system built for handling several €100M of portfolios. Am focused on the backend, creating a financial system with certified bank level security (great pentest score), a perfect audit trail (using event sourcing), and a plethora of features (great feedback from bank management). Working remotely in a distributed team across four countries and three time zones. Contract, 40 hours per week, 100% remote.

Agile, Node.js, event sourcing, system architecture, API design, object oriented programming, Typescript, ES2017+, async/await, ES6 classes, testing, devops, monorepo, Docker, Kubernetes, PM2, React, git, Gitlab, Slack.

Senior Software Consultant, ERGO Group AG

June 2017 – October 2017 · Remote

Developing a high-profile B2B insurance portal as part of ERGO Group's — one of the largest insurance groups in Europe — digital expansion in ERGO Digital IT GmbH. Adding new business features and microservices, refactoring and improving production systems and code. Developed a good understanding of the complex system, and handled technical onboarding of several batches of new hires. Working remotely with multiple office locations in an international team. 40 hours per week, 95% remote.

Microservices, architecture, agile, knowledge transfer, distributed teams, devops, Node.js, Hapi.js, React, Redux, Redux-saga, ES6, Promises, async/await, AWS, Docker containers, Kubernetes clusters, git, Github, Jira, Slack.

Systems Architect, Shing

March 2017 – August 2017 · Remote

Moving Shing forward from an MVP towards a stable SaaS platform for e-commerce in the age of sharing economy. Providing feedback on business requirements and transforming it to a full-stack systems architecture. Supporting developers, from junior to senior, in their decisions. Part time, 100% remote.

Node.js, AWS, microservices, ES2017, message queues. Outsourcing development teams, code reviews.

Backend Software Engineer, BCG Digital Ventures

July 2016 – September 2016 · Berlin, Germany

Working on the backend in an agile, mid-sized greenfield project for an external Boston Consulting Group client. Designing the distributed microservice oriented architecture, designing the API for iOS/Android/web, implementing business logic together with the backend team in close collaboration with other teams. Contract, 40 hours per week/100%, 80% of work done remotely.

Node.js, microservices, architecture, API, Amazon Web Services (AWS Lambda, S3, SNS, SQS, DynamoDB etcetera), design patterns, dependency injection, Aurelia, javascript ES6/ES2015/ES2016, Promises, git, github, Stash, JIRA, agile development methodologies.

Backend Software Engineer, Ohlala.com

May 2016 – June 2016 • Berlin, Germany

Refactored the entire backend, stepwise taking the company from an MVP to a stable platform for international customers. Architected a promise-based implementation together with the CTO, working towards creating a reliable, tested, distributed, micro-service based architecture. Contract, 20 hours per week/50%, 80% of work done remotely.

Javascript, TypeScript, Node.js, NPM, ES6/ES2015, Promises, refactoring, architecture, git, git-flow, agile development methodologies.

Software Engineer, KAYAK

October 2015 – February 2016 • Berlin, Germany

Working on the full stack of kayak.com and affiliated web sites, out of the 120+ employee office (technology center) in Berlin. Collaborated with product managers to implement new features from scratch, all the way from the database layer, through the java backend, to the responsive frontend. Solved as well as reported bugs and tickets, mostly on the frontend. Dealing with dynamic site branding in a shared codebase, localization and internationalization issues. 40 hours per week/100%.

Java, Spring, Tomcat, Keel, Velocity, Javascript, HTML, LESS, CSS, git, JIRA, lots more.

Consultant (Sweden)

March 2014 – October 2015 • Stockholm, Sweden

Technical reviewer of programming books in writing, such as NodeJS Design Patterns for Packt Publishing.

NodeJS, design patterns, code review, text review, documentation.

Involved in DNS, DNSSEC software development and promotion through Verisign Labs, NLnet Labs and IIS.se. The quick hack dnssec-name-and-shame.com has received attention from the DNSSEC community, and has been presented by top names at RIPE, ICANN conferences. There's even an official t-shirt.

Web, internet, software development, security. DNS, DNSSEC, getdns, getdnsapi, node.js, mongodb.

Master's Thesis Researcher

March 2014 – February 2015 • Stockholm, Sweden

Writing my master's thesis researching web page resources in general and ads, web bugs, click/user trackers in particular, within the .SE top level domain. The thesis was the final step in receiving my Master's Degree in Information Technology and Engineering. 40 hours per week/100% for six months, 50% of work done remotely. joelpurra.com/projects/masters-thesis/

The paper "Third-party Tracking on the Web: A Swedish Perspective", based on the master's thesis, has been accepted to IEEE LCN 2016. It was co-written and presented (2016-11-08, Dubai, United Arab Emirates) by my thesis supervisor Niklas Carlsson, associate professor at LiU.

Research, web, automation, crawling, software development, technical writing. PhantomJS, jq, bash, HAR, JSON, HTTP, HTML, JavaScript, git, LyX, LaTeX.

Backend Software Engineer, Enginuity Group

July 2012 – January 2013 (7 months) • Toronto, Canada Area

Developing private demo/minimum viable product for stealth startup. Working with system architecture, development practices, code review/testing, visualization, cross-operating system development support, deployment and tools plus introducing new coders to the system. Contract, 20 hours per week/50%.

Built using CouchDB/CouchApp on Cloudant and VM Farms, node.js, backbone.js, Backbone Marionette, mustache.js, underscore.js, fabric deployment, leiningen, shell scripting, SilverLight 5, Twitter Bootstrap, jQuery, git/github.

Senior Backend Web Engineer, Mercatus Technologies Inc.

May 2012 – August 2012 (4 months) • Toronto, Canada Area

Optimizing complicated backend architecture, implementing critical speed improvements before relaunch of www.PriceChopper.com, a grocery store chain with over 100k likes on Facebook. Implementing a caching layer to reduce the number of remote API calls. Implementing additional backend and frontend features after relaunch. Implementing supporting software, proof-of-concept code/tests for Mercatus' clients. Improving Mercatus' .NET API. Contract, 16 hours per week/40%.

Working with C#.NET4, ASP.NET MVC3, NHibernate, MySQL, Mercatus API, log4net, Visual Studio 2010, ReSharper. Mercurial HG, Subversion SVN. Javascript, jQuery, AJAX, HTML5, CSS3, XML, XSD, XSLT.

Architecture. Optimization. Debugging. Caching. Web. Cross-browser compatibility. Maintainability.

Frontend Software Engineer, Open Source Clinical Application Resource (OSCAR)

March 2012 – August 2012 (6 months) • Toronto, Canada Area

Implementing the front-end for medical intake forms in the Client Access to Integrated Services and Information (CAISI) submodule for some of the health care providers in Toronto. The submodule is an integrator to facilitate the seamless flow of medical information in multi-site care. Contract, 10-16 hours per week/25-40%, 100% of work done remotely.

HTML5. CSS3. jQuery. Twitter Bootstrap. Jekyll. PhantomJS. Legacy system integration. Forms. Usability. Accessibility.

Software Engineer, The Swedish Post and Telecom Authority (PTS)

August 2011 – January 2012 (6 months) • Stockholm, Sweden

Developing software to manage undeliverable letters and other mail. Three developers, one product owner developing for eight postal administrators and one manager. Business improvements leading to improved results for the administrative unit. Working with agile methods. Contract, 40 hours per week/100%.

System coded in C#.NET4 with Entity Framework 4.1 Code First against MySQL, ASP.NET MVC3, Visual Studio 2010, ReSharper, HTML5, CSS3/LESS CSS, AJAX/jQuery/JavaScript, MS SQL Server

2008, Code Contracts, Pex, MSBuild, NuGet, open-source frameworks/tools Selenium WebDriver, CruiseControl.NET, NAnt, Castle Windsor, NUnit, QUnit, labJS, Modernizr, Solr, SolrNet, Elmah, Glimpse, Rhino Mocks, OpenCover, log4net and more.

Architecture, framework evaluation, coding, testing, unit tests, high code coverage, best practices, refactoring, code cleanup, object-oriented programming, object-relational mapping, user education, scripting, layout, cross-browser compatibility, usability, maintainability.

Software Developer, Outokumpu Nordic Brass Gusum AB

February 2010 – June 2010 (5 months) · Linköping, Sweden

Developing client, administration and server software to manage material and products in the brass industry. Main full time developer, with one tester and three part-time consultants for different separate, but integrated, systems. Contract, 40 hours per week/100%.

Agile development following Microsoft Solution Framework (MSF) for Agile Software Development Process, using VSTS/Team Foundation Server for project tracking/source control and SharePoint for documentation/planning.

System coded mainly in C#.NET3.5 with MS SQL Server 2005+2008, WPF, ASP.NET MVC, LINQ to XSD, XML/XSD/XSLT, open-source frameworks NHibernate, NUnit, Rhino Mocks, Sharp Architecture, Caliburn, log4net and more.

Running in a Citrix environment, integrated with legacy systems (Movex/DB2 on AS/400), custom GS1-128 barcodes (Datalogic barcode readers), barcode/label writers, legacy printing systems (StreamServe).

Architecture, automated unit tests, high code coverage, object-oriented programming, object-relational mapping, N-tier, multiple front ends/clients, specialized industrial environment, workflow, resource management.

Hacker, Software Developer, Swedish Defence Research Agency (FOI)

October 2009 – December 2009 (3 months) · Linköping, Sweden

Developing cyber warfare (hacking) simulation infrastructure and supercomputer/cluster control software. Part of a team of 17 engineers. Software in use at national and international cyber warfare (hacking) exercises. Contract, 10 hours per week/25%.

C#, WinForms, SQLite, LINQ to XSD. XML/XSD/XSLT. VMWare, Linux, Windows.

Business analyst/requirements engineer and systems developer, BAE Systems Hägglunds

January 2009 – June 2009 (6 months) · Linköping, Sweden

Gathering system requirements and co-developing a C++ bridge between a CORBA (Common Object Request Broker Architecture) service and a COM (Component Object Model) application called www.COM2CORBA.com. Part of the course TDDD09 Software Engineering Project (PUM-projekt) with six other master students. Now released as open source under GNU GPL.

Team Leader, Swedish Defence Research Agency (FOI)

October 2008 – December 2008 (3 months) · Linköping, Sweden

Four teams (in Sweden and Estonia) of computer engineering students playing defense in an international cyber warfare exercise, preparing online server systems against hacking and DDOS attacks. Working with the web backend (Ubuntu, Lighttpd, WordPress, MySQL), team leader during attacks -- successfully defending the systems. A joint exercise between Swedish Defence Research Agency (FOI), The Swedish National Defence College (FHS), The Estonian National Defence College (KVÜÕA/SIVAK), Swedish Defence Materiel Administration (FMV), SAAB Combitech and Linköping University (LiU).

Second Lieutenant, Systems Specialist, Swedish Armed Forces

January 2002 – May 2003 (1 year 5 months) · Enköping, Sweden

Fänrik. In charge of personnel (second in command) and technology at company level. Advanced systems specialist (Swedish Military Academy for Technology) for all land-based communications system, including mission critical long and short distance mesh networks. Teaching radio/phone communications, systems setup to the Swedish Armed Forces of Kosovo (NATO's KFOR) before deployment.

Education

Master of Science in Information Technology and Engineering, The Institute of Technology at Linköping University

2003 – 2015

Master's thesis: "Swedes Online: You Are More Tracked Than You Think". (urn:nbn:se:liu:diva-117075) joelpurra.com/projects/masters-thesis/

All courses finished in January 2010. Master's thesis written 2014/2015. 2006, 2007, 2010, 2011, 2012, 2013 was spent working and traveling.

Problem based learning, group projects, computers, programming, networks, math, engineering. Majored in Media Informatics.

High School Diploma, Computer Technology and Natural Science, Forsmarks Skola

1999 – 2001

Private boarding school for science studies, specializing in computer science and physics/energy production. Owned and operated as a part of Forsmark Nuclear Power Plant, a subsidiary of Vattenfall. Designated as the best school in Sweden by the government's Expert Group on Public Economics (ESO) in a report during my second year.

References

At least 18 people have written recommendations on LinkedIn, and dozens have given skill endorsements. Contact information and further details available through LinkedIn: [joelpurra.com/cv](https://www.linkedin.com/company/joelpurra)

"Joel was working as a Senior Software Consultant together with one of the teams which I was overseeing at ERGO Digital IT GmbH. He was actively taking part in the software development of the team and showed great expertise in topics around the software development, application architecture, security and deployment. He took an active part in a community of practice to foster the cross team knowledge sharing and to identify opportunities for cross team synergies. He supported the onboarding of new team members by running a series of sessions for training and knowledge transfer which were highly valued by his colleagues.

I really enjoyed working together with Joel and I value him as a fantastic sparring partner for the shaping of technical topics as well as improvements around the software development processes. He has great coaching and mentoring skills.

I am looking forward for future chances to work together again."

— Johannes Bornhold, *Head of Engineering at ERGO Group AG*, managed Joel indirectly at ERGO Group AG

"In 2017, I had the pleasure to work with Joel in one of ERGO Digital IT's projects, building an online portal for B2B insurance customers. Joel was working both on feature development and technical facilitation for the whole development team. I was working as business analyst, supporting developers to understand stakeholder's requirements.

After only some days it became obvious that Joel was one of the smartest developers I have ever worked with. He was never simply doing programming, but he was thinking out of the box and came with better ideas, always keeping the big picture in mind. He has a deep understanding of all kinds of software-related topics and is always willing to share his knowledge with team members.

If there was a complex implementation question, my BA colleague and I soon got used to ask Joel for his advice regarding how to approach the topic and asking him to realize it because we knew he would not only finish a task fast but also in very high quality.

Also from a human perspective, Joel is a colleague to be grateful for: He's funny, patient and always willing to give a helping hand.

Having Joel in the team was a tremendous enrichment and I would be happy to get the chance to work with him again in the future!"

— Julia Toifl, *Technical Consultant at Senacor Technologies*, worked directly with Joel at ERGO Group AG

"I had a chance to work with Joel during handover sessions at ERGO.

He was supporting our onboarding by running a series of hands-on for training and knowledge transfer.

What I liked the most was detailed explanation of each tool, service or issue he was facing.

Joel had a lot of patience during handover and also shared thoughts and recommendations.

He showed great attitude and full professionalism

All his changes in source code are very well documented and you can easily understand the logic.

I would strongly recommend Joel."

— Maciek Kapuscinski, *Senior Software Engineer at ERGO Group AG*, worked directly with Joel at ERGO Group AG

"I was working with Joel in one team. He was working few months longer than I, so knowledge transfer was needed. I have to say that I have never met before someone so talented and helpful in the same time. His handover sessions gave us (new team members) general understanding how application is structured, how we should act with development process without his sessions we would lost many weeks, because our project was so complicated... I highly value his programming and mentoring skills. His extensive knowledge (architecture, security, frontend, backend, databases) is invaluable. Beyond the IT skills Joel is also a great person, it was really pleasure to work and learn from him."

— Bartłomiej Łoza, *Senior Fullstack Engineer at ERGO Group AG*, worked directly with Joel at ERGO Group AG

"I really appreciated working with Joel on the same project.

He is a very skilled developer with a broad view of application architecture, security, development and deployment processes, as well as code quality.

Joel paid much attention to delivering features with tests and thorough documentation including architecture diagrams which were extremely valuable for us to understand how the system works.

He identified problems well in advance and proposed solutions.

Joel started earlier in the project and then did a great job transferring his knowledge to the team of new people. I highly value his teaching and mentoring skills."

— Pawel Koziol, *Lead Software Engineer at ERGO Group AG*, worked directly with Joel at ERGO Group AG

"I was managing Joel directly as the CTO of Spreefang (Ohlala.com), where I hired him as an interim software engineer contractor, working part-time remotely and part-time in the office. Our goal was to redesign the company's "minimum viable product" API/backend written in a custom style, to a modern NodeJS architecture. The long-term goal is a distributed microservice-based architecture with reliability and scalability in focus, which was devised with Joel's help. He has long experience in breaking down an existing, complex solution to manageable parts suitable for distributed execution, automated testing and highly collaborative programming.

The refactoring uses NodeJS 6 and TypeScript with ES6/ES2015 features, on top of CouchDB, with multiple tiers connected in a promise-based, asynchronous style. Joel is familiar with a wide range of tools and techniques, and his sense of order and structure instills trust. With a lot of my focus devoted to other tasks than refactoring, he was largely left to his own devices solving a large problem by himself. Within the framework given, he rewrote complex code to much more straightforward code in components which can be easily reused. This gives us a good base to work towards our longer-term

goals by speeding up both technical and product development.

Having worked with Joel, I can vouch for his dedication to technology and delivering high-quality solutions, and recommend him to any company which needs a great engineer. He cares deeply about code quality and architecture, and it's a shame that we can't hire him full-time to our startup. Good luck and hope to work with you again!"

— Dr. Torsten Stüber, *Co-Founder & CTO at Spreefang*, was Joel's client at Ohlala.com

"Joel is a pro active problem solver with long years of experience as software developer. He's fun to work with, reliable and happily shares the broad knowledge he gathered throughout his career which has been very valuable for the team and the project."

— Daniel Schäfer, *Full Stack Mobile/Web Developer*, worked directly with Joel at Ohlala.com

"I met Joel at the 2014 "The Next Web" conference in Amsterdam last year. We were partners in a 36 hour Hack Battle. In that short time we developed and launched dnssec-name-and-shame.com, which is still up and running today. The web site allows the user to enter any domain and discover if that it is secured by Secure DNS (DNSSEC). At the end of the hack battle and conference, the web site won an award from PayPal.

Joel is a "SuperCoder", understanding all aspects of a web site, from registering the domain, setting up the sites DNS entries, and the bulk of the websites development in a 36 hour period. He was a great teammate and was a pleasure to work with. Also a quick learner, having to pick up a new API in a short time to provide the DNSSEC queries.

I would highly recommend Joel for any software related position."

— Tom Cuddy, *Principal Consultant at NARTech, Inc*, worked directly with Joel at joelpurra.com

"With great devotion Joel took on the complex problem to identify the scope and use data tracers on the Internet. The task was complex both in terms of the technical challenge to monitor a large portion of the Internet and the ethical and social science questions that surrounds the subject area. He showed a lot of good will and an endurance to independently accomplish this extensive work to a conclusion."

— Staffan Hagnell, *Head of R&D at IIS (The Internet Infrastructure Foundation)*, managed Joel at IIS

"Joel has keen eye for structure, and following best practice. He really knows how to keep a repository looking clean, writes fantastic documentation, and is fun to work with."

— Josh Teneycke, *Front End Developer and IT Support, Enginuity Group*, worked indirectly for Joel at Enginuity Group

"Joel worked on the full stack of the project; from our NodeJS backends to maintaining visualization code in the front end, as well as taking lead on managing code pushes to the production servers. We could always count on him to make code that's well-organized, readable and maintainable. And he would make sure to take a look at our commits and give regular feedback regarding best-practices and improvements. As an example of his professionalism, upon leaving our team, he made sure that the transition was as smooth as possible by training myself and other teammates. This was just one of

the many ways that he contributed to the overall productivity of the team."

— Ravi Desai, *Programmer, Enginuity Group*, worked directly with Joel at Enginuity Group

"I hired Joel as a developer on a software project I am managing in a stealth start-up in Toronto. This is the second time I've had the opportunity to hire him; it's something I could not pass on. Joel's role was to design the system/service architecture, implement several subsystems, improve development practices and to aid the other developers with his expertise in web and software development. He's not afraid to dive into new areas, working with multiple programming languages/libraries and has helped out a lot when we've been under time constraints. He's also been very helpful in stabilizing and normalizing the entire multi-server environment across multiple operating systems/platforms to minimize perceived differences between development and production. We're sad to see Joel leave Canada for new opportunities and adventures, and would gladly have him work with us in an even greater capacity - you are welcome back anytime!"

— Paul Bearne, *WordPress / Technical Consultant, Freelance*, managed Joel at Enginuity Group

"Joel is a passionate ASP.NET MVC3/C# developer consult. He has a sound understanding of software development and architecture, and can formulate a maintainable and clean solution to any problem I presented to him. He is extremely pleasant to work with and is an asset to work with."

— Alan Lok, was Joel's client

"Joel is a motivated and passionate technologist. Joel is committed to resolving complex software/architectural/web issues quickly and effectively."

— Bohdan Zabawskyj, *VP - Technology, Mercatus Technologies Inc.*, managed Joel indirectly at Mercatus Technologies Inc.

"Joel is a skilled developer with a wide knowledge of useful techniques, frameworks and products. We formed a team to develop an internal tool, where Joel was in charge of the architecture and back end development. He's got drive and I would not pass on the opportunity to work with him again!"

— Paul Bearne, *WordPress / Technical Consultant, Freelance*, managed Joel at rDoing.com

"Joel was part of a project at the Swedish Post and Telecom Authority (PTS) Aug 2011 through Jan 2012 where Attentec supplied all of the designers and developers. The project was a great success and managers at PTS were very happy with the team from Attentec both regarding competence and attitude. A key success factor was the agile approach adopted from the very start. I know Joel as a brilliant developer eager to learn and use the very latest tools and methods to achieve optimum results. He has good communication skills which allows him to build confidence with end-users leading to a positive requirements dialog and a great result. I wish Joel best of luck with his international ambitions and career. I can easily recommend him as a designer and developer and am happy to provide further details upon request."

— Lars Lundberg, *Partner and General Manager, Stockholm, Attentec AB*, managed Joel at Attentec AB

"Joel is a highly skilled software developer with good knowledge of tools and best practices. You can be rest assured that code written by Joel is of the latest standards, robust and exceeds your expectations."

— Johan Govers, *Software Systems Designer Consultant, Attentec AB*, worked directly with Joel at The Swedish Post and Telecom Authority (PTS)

"I had the fortune to work six months together with Joel on a project where we designed a new a system. Joel was a great injection of technical excellence and always made sure that the system was built to hold together and he took no short-cuts. Joel strived for a good test coverage and left us with a clean nice code. Joel is very social and got along really well with our end users and rest of our technicians at our company. I believe that Joel would bring value to any project where new technology is used and there is need of someone "who is willing to try just one more thing to make it better"."

— John Cirverius, was Joel's client

"In Skill's project at FOI, where a lab-environment for IT-safety technicians was developed by 15 people during a couple of months in 2009, Joel was one of the most skillful programmers. Joel is charismatic, open-minded and a high performance programmer with a genuine interest in programming techniques. He has a broad network within his area of work and is an explorer in the field of new software. Therefore Joel also made a terrific job, coming up with a quick solution to a customer problem, even at Nethouse. If you need an inventive expert I would gladly recommend hiring Joel."

— Ove Sjöström, was Joel's client