

Mark Litwintschik

Born: July 2nd, 1982.

I hold both a British and a Canadian passport.

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Profile

I am an ambitious, friendly and experienced open source web developer. I'm a strong believer in test-driven development and service-oriented architecture.

Education

University College London

September 2007 - March 2008

London, UK

I took an Estonian Language course.

Lord Beaverbrook High School

June 2000

Calgary, Canada

Graduated High School with advanced placement in Computer Sciences.

General Skills

Linguistics

English	Native speaker
German	Good; Spoken for 10 years
Estonian	Basic; Studied at UCL
Russian	Basic; Studied at KCL

Technical Skills

Backend / Frontend / Version Control

PHP	12 Years	Expert
Python + Django	2.5 Years	V. Good
Tornado	1 Year	Good
HTML5, CSS3	16 Years	Expert
CoffeeScript, JADE, SASS, SCSS	9 Months	Good
Yeoman / Grunt / Bower	9 Months	Good
Backbone.js	1 Year	V. Good
AngularJS	4 Months	OK
jQuery, jQuery Mobile	6 Years	Expert
Bash, Coreutils	12 Years	V. Good
SVN, Git, Mercurial	~6 Years	V. Good

Databases / Data stores

MySQL	12 Years	Expert
Postgres + GIS	1.5 Years	OK
CouchDB	6 Months	OK
Memcache	5 Years	Expert
MongoDB	2 Months	Basic
Redis	2 Years	V. Good

Testing

Python Unit Testing w/ Mock	1.5 Years	Good
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Message Queue / Job Systems

ZeroMQ (ZMQ)	1 Year	Good
Celery	1 Year	V. Good

Continuous Integration / Deployment

Jenkins	2 Years	Basic
Fabric	2.5 Years	V. Good
Chef + Vagrant (TDD)	3 Months	Basic

Hosting / Deployments / Monitoring

Apache	9 Years	V. Good
Nginx	3 Years	V. Good
Gunicorn	2 Year	V. Good
HAProxy	1 Year	OK
Varnish	1 Year	OK
Amazon S3, EC2, Cloudfront	5 Years	V. Good
PowerMTA	4 Years	V. Good
Postfix	5 Years	Good
Sphinxsearch	4 Years	V. Good
Nagios	6 Years	Good

Design / Encoding / Imagery

Photoshop	16 Years	Expert
ffmpeg + h264 libs	3 Years	Good
ImageMagick	5 Years	Expert

Work Experience

Acting Chief Technology Officer

Stickyworld Ltd

December 2012 – Present

London, UK

I'm architecting the technical upgrade of the core web app, organising the tech team procedures and operations, doing hands-on, full stack development and assisting in the marketing and company communication efforts.

Before I took on the Acting CTO role I was a consultant for Stickyworld. I helped them design a migration plan from a LAMP-based, monolithic system to a service-oriented model using test-driven development (TDD).

Technical Consultant

Mindsmeet

December 2012 – July 2013

London, UK

I helped Mindsmeet pick technologies they would use to build the web-based side of their self-service, expert matchmaking service. This involved several meetings and phone calls. I delivered various diagrams, write-ups and boilerplate code to help get them started. I answered various ad-hoc queries as they came up during their development process. I also

helped interview candidates for various software development roles they were recruiting for.

Python / Backbone.js Contractor

News International

September 2012 – March 2013

London, UK

I built an audience segmentation tool to help News International's marketing team understand the sizes of various reader pools.

An award-winning designer was brought in to put together an interface that would look and behave in a modern fashion. I then took those designs and initial HTML5 and CSS3 files and integrated them into a backbone.js app that built solr jsonp-based queries and did various bits of negotiation with the backend server. I also built an SVG-based dial widget that helped explain ratios as various metrics were faceted on. Twitter bootstrap was later retrofitted into the application so we could make sure if it's widgets.

The backend I built for the project used Tornado, redis, solr and nginx. I was able to bring the average response time for a query on a multi-million-row database down to less than 4ms. The resulting query would update individual facet counts across 40+ metrics in near-realtime.

I spent a lot of time looking at spdy, dns shot-gunning, query simplification and network utilisation minimising in order to getting query results back and rendering as quickly as possible.

Google Site Authentication was used for identification along side an internal federated permissions system.

I also built a dashboard for News Internatioal that would report on problems or lack-of-problems across my department's data import and processing efforts. Users could drill down a hierarchy and see across various working days how well certain stages of each process were performing. The web app is now shown on large TV screens around the floor I worked on.

Python / Django Contractor

Studio Mohu

August 2012 – September 2012

Tallinn, Estonia / London, UK

I helped develop a design consultation and sign-off web service for one of Studio Mohu's clients whom was involved in package design for large, international brands. The client could upload work they'd produced in a variety of formats that would be embedded into well-designed

PDFs automatically. The end client could then download the PDFs which came from Amazon Cloudfront. The system would allow for various forms of consultation before approval.

Technologies used: Django, Tastypie, Unittest2, Mock, Amazon S3 and Cloudfront, wkhtmltopdf, pdftk, nginx, Ember.js and Flash (for file upload progress, drag and drop uploads and multiple file uploads).

Founder, Python / Django Developer

Sheshapip.es

March 2012 – September 2012

Tallinn, Estonia

I built <http://sheshapip.es/> to help people locate Egyptian Water Pipe cafes around the world based on location, price and amenities.

It's was built using Django, Postgres, Celeryd, Django Social Auth (OAuth wrapper), Django Storages (for S3 and Cloudfront storage), GeoPy, PyGeoCoder, Unicorn, Nginx and Redis for worker queue brokering and caching.

I shut down the site after a year. The costs of maintaining the site, paying for hosting and the domain weren't justified. The technology I used and problems I found and solved proved to be the most valuable things I got out of the business as many of my clients I consult for use the similar technology stacks.

Python / Django Contractor

Isobar Mobile / Glue Isobar

Oct 2011 – January 2012 (Contract)

London, UK

I built a backend and CMS in Django for **Vertu**, **Nokia's** luxury handset unit. We used Mercurial for source control and fabric to help with deployment. The project was managed using Collab (a trac clone Nokia use). The backend exposed a json-based API that mobile handsets would communicate with. I wrote Unit Tests that covered 85% of the various codebases involved. I ran a test environment in VirtualBox that ran Centos. The virtual machine was built using Puppet scripts from Nokia.

For the majority of the contract I was working on my own but there were two weeks where I was working with two other Python developers.

The systems worked in 7 languages (English, German, French, Spanish, Russian, Chinese and Arabic). They were built using Django, MySQL, ZeroMQ, Fabric, Django Unit Tests, PIL, South, Django Easymode and Django Rosetta.

I also did research for an unnamed client, built prototypes and wrote an 18-page technical document explaining how to build a backend for a new crowd-based, video mosaic project. The idea is that a group of people in an audience would hold their phones out and

together it would show a video using each of their phones for a few of the pixels of the video.

The research documentation was written in markdown. Using fabric I would compile the markdown into HTML. I'd then render the HTML into a PDF using wkhtmltopdf and finally the PDF would be merged with some pre-formatted templates using pdftk.

The backend solution I ultimately proposed included using Python, Django, Unicorn, Nginx, Ubuntu, Supervisor, RabbitMQ, msgpack, ffmpeg, ImageMagick, Blender (a 3D package), JQuery, Canvas, WebGL, Three.js, MySQL and redis.

All the materials I created for the project were stored on github.

I wrote fabric scripts to setup various development environments. It worked much like chef but was written in Python.

Python + Django Developer

Imagination

Oct 2011 – January 2012 (Contract)

London, UK

I worked on 6 backend daemons for Imagination's end-client **Ford**. They were used at the Detroit Motor Show in January.

I also built up Chef Scripts to setup 7 virtual machines in the UK and 7 virtual machines in the USA that hosted all the Python-based daemons used during the show.

The primary tools and libraries I used were Django, SQLite, ZeroMQ, Chef, Jenkins, Fabric, South, PIL, Gunicorn, requests (for HTTP requests). For testing and SCM we used Django Unit Tests with coverage reporting, git (using tig and gitflow) and github for hosting. There was a Jira system for tickets and Google Docs for the various specifications we were working from.

Python / Django Contractor

Studio Mohu
Sept 2011
London, UK

I built the backend and integrated the frontend code of **brandopus.com**. It's built on/using Ubuntu, Linode, Django, Git, Github, MySQL, Redis, South, Gunicorn, Nginx, Supervisor and Fabric. I've also integrated the frontend that was done in HTML5, CSS3 (via LessCSS) and jQuery (Via CoffeeScript). I migrated their wordpress blog using BeautifulSoup and Django's ORM via a custom Django management command and various python-based modules I put together.

I've also built a video merging API and backend for the **Royal Mail**. The flash frontend would

use the API to instruct how to cut and merge various mp4 videos hosted on amazon cloudfront. They were then processed and outputted with ffmpeg in mp4 format using x264 and aac codecs. The resulting videos were viewable in flash and on iPhones. The basic architecture was 4 modules run as worker queues. They're all custom Django management commands running in a bash loop and kept running via supervisord. Since joining Mohu migrated several sites from Rackspace to Linode and I've setup a continuous integration system.

I also helped with a PDF web service where documents are created from HTML and CSS and another service where documents are merged together and served as a single PDF. The was all built using Ubuntu, various command line utilities and Django for the web services API.

I helped Mohu migrated several sites from Rackspace to Linode. I've also help setup a continuous integration system. I conducted a training course for my coworkers explaining how file system and network security is implemented in Linux. I helped with some client pitches getting timings and estimates together.

Senior PHP Developer

Bloomberg
July 2010 – Sept 2011
London, UK

I work in a team of six developers, one tester and one front-end engineer maintaining bnef.com. The site runs on a codeigniter / Zend Framework stack. Independently, I also built and maintain all the automated emailing systems we use to communicate new clean energy and carbon trading research and news to our clients on a daily basis. We were sending ~30K emails daily when I was working there.

I administered the Adobe LiveCycle DRM system we use to protect our research PDFs from piracy. The server ran on Amazon EC2 cloud hosting platform. I put together processes to compress our PDFs to 1/10th their original size.

I also developed a system to reconcile credit card purchases to new client accounts using codeigniter.

Chief Technology Officer

iVoucher
January 2010 – July 2010
London, UK

iVoucher is a VC-funded start-up focused on capturing and marketing systems for retailers by allowing them to distribute vouchers to their customers.

We've built a complete suite of SMS and emailing systems as well as a modern web signup system to allow retailers to learn as much as they can about their users. Users can also provide their hotmail, gmail or yahoo email account details and share voucher codes with everyone in their address books.

Together we put together a vision for what iVoucher would offer in January and by May we'd launched our service.

I designed the services in Photoshop, develop half the PHP code, hire PHP developers to code the other half, negotiate down prices with suppliers, setup a clustered hosting setup with 4 dell servers in a well-peered hosting centre, setup the UK mobile short code 88825 and setup the interfaces between our systems and our SMS wholesaler.

I put a lot of effort into a clean technical architecture that would scale beyond anything I had previously setup. Facebook's backend architecture was a major inspiration for what I built. I hunted through twitter's, facebook's and linkedin's job adverts finding out what tools they've been using to build their systems.

Most tasks in iVoucher are handled by CRON jobs and compiled binaries. I did this so I could move jobs between servers as load increased. I modified the crontab to run on second-

increments so we can handle events quickly without needing to build standalone daemons.

I also made sure coding standards and development processes were in place and that I could train any junior PHP developer on the entire development stack in 3 days. YSlow provided a lot of direction on best practices for both the front end and server side of things. We currently achieve a grade B rating with yahoo's firefox-based checker.

I ensured all javascript was coded as anonymous functions that execute immediately or fell into a strict namespace convention. iVoucher is a javascript-intense solution so memory leaks would pose a serious issue.

All user interfaces use a limited set of design components. Everything you can read you can also touch meaning all interfaces work well off desktop computers as well as mobile phones and devices such as the iPad. iVoucher works in any language we can translate it into. It also works in countries like Belgium and Canada where there more than one official language.

4 hours a week were dedicated to code review and clean up. Every programmer's code is identical to one another's both in structure, syntax and formatting.

I had seven golden phone interview questions to filter down candidates for PHP roles. I had occasions where developers accepted roles in my team over higher paying roles in other firms.

PHP Developer

Bloomberg New Energy Finance
January 2009 – January 2010
London, UK

Bloomberg New Energy Finance researches investment in clean energy and carbon trading. They provide information to the UN, the EU, National Governments, Banks, Funds and other financial institutions. They had offices in 8 countries around the world and 120 staff members prior to be acquired by Bloomberg in December 2009.

I re-built the company's corporate site using the codelgniter php framework, mysql, memcached, jquery, xhtml, css, photoshop, pngoptimizer, firebug, ySlow and Wireshark. I used a large number of optimizations from ySlow, Yahoo's tool and help guide.

I built a CRM system that sends emails via PowerMTA. It was built using an off-the-shelf html/css template, codelgniter, some Zend libraries, nicedit (for the cms WYSIWYG email-creation system), several

bash scripts running via cron jobs, PowerMTA, postfix all running on Ubuntu Linux. There were a lot of email best practices built in like domain keys, spif, auto-bounce handling (works in 12 languages and a huge range of formats), pre-headers, stats overlaying and lyris testing (tests against 10 spam engines, 40 email clients and 400 ISPs).

I integrated Adobe's LiveCycle Rights Management system with our internal MySQL database of user records using 2 java components. They are now able to distribute their PDFs in a secure fashion. Users must enter their details in order to open any PDF. If their account expires, they can't open our PDFs anymore.

We spent 3 days researching PHP frameworks to decide on which would be the best to work with. We ended up going with codeigniter and Zend.

I setup trac and SVN and helped design a new workflow for the tech team.

I made significant optimizations to the production database and the main paid-for and corporate websites bringing load times down from ~6 - 60 seconds per page to near-instantaneous in some cases.

I built a web service system so common and complex tasks can be abstracted through a REST-based Web Application system. I did a lot of design in Photoshop, Information Architecture and jQuery-based prototypes for various projects.

Technology Director

Kieon

September 2008 – January 2009

London, UK / Bangalore, India

Kieon is a technology-neutral software development firm that mostly writes .NET and PHP code for UK-based marketing firms. Their clients include several top marketing agencies and as a result, have a wide and varied end-client list.

As Technology Director, I pitched to and met with UK-based clients and end-clients as a technical representative for our 60-strong development team in India.

On projects we'd won, I would take specifications, vet them for any issues and organize the projects with account managers, project managers and development teams in India.

I would dictate how the software was to be developed and on occasion I would have to step in to write code myself.

I brought in best-practice procedures for LAMP-based development, Front end development, version control, mass-email sending, knowledge sharing via wikis and hosting on Linux-based platforms.

I oversaw work done by the team in Bangalore and made sure they met clients' expectations here in the UK.

I worked for 2 weeks in India setting up new development procedures, sorting out technical infrastructure and training staff.

Technical Manager / Lead Developer

blue barracuda marketing ltd.

March 2004 – September 2008

London, UK

I had a significant technical and planning role in most projects for the majority of our 40-some-client base. I built database-driven websites that run and scale over our load-balanced servers.

I sent ~1.5 million emails a month for our clients. I also managed a server for a client that sends email to every other household in the UK. My technical knowledge and experience helped us win some very large CRM clients.

I developed websites, bespoke tracking setups, podcasts and email, viral, SEO and Adwords campaigns. I helped design the business plan for our office branch in Estonia. I played a large technical role in getting a clustered CMS system ready for flash video hosting for Harrod's "Design Icons" campaign. I also provided a lot of advice on editing and encoding methods.

In 2004, I spearheaded the compliance of W3C standards such as XHTML, CSS and Accessibility with several client websites. Among these are the Heathrow, Gatwick and Stansted Airport websites we did for BAA.

My leadership within blue barracuda

I was the lead developer / technical project manager for several tight-deadline projects. I would instruct up to 4 PHP developers, 3 front-end developers and 1 tester on what to do. I would report back to our client services and board on the project progress regularly. In London, I helped put in place guidelines for most aspects of our LAMP-based development. We used code ownership and small incremental updates whenever possible to minimise issues. All updates were tested on recreated live websites in a development environment before going live.

Though most of my work was done in London, I also had a hand in setting up our Estonian

office. I trained staff in Estonia on using Analytics Packages effectively and basic usage of MySQL for statistical analysis. I helped setup guidelines for XHTML/CSS/Email development and testing procedures for all work completed by our Estonian team.

Primary Software and Skills Used: PHP, MySQL, XHTML, CSS, Linux, Apache, SVN, SEO, PPC, Photoshop, Flash, Action Script 3, MS Office and QuickTime. My clients included:

Angels	LOVEFiLM
Austin Reed	Nectar
BAA	NMA
Barchester	Noble House Media
BlackBerry	Novus
Buy Cosmetics	Office World
Danone	Pizza Hut
ELC	PricewaterhouseCoopers
Fat Face	Royal Bank of Scotland
Financial Times	Staples
Goldsmiths	T-Mobile
Hamleys	TGI Fridays
Harrods	The Banker
ISBA	UKTV
ITV	Williams Formula 1
Krispy Kreme	Xerox
Laithwaites	Visit London

Web Application Developer

COMBridge AG

September 2002 - March 2004

Bremen / Wolfsburg / Hannover, Germany

I developed web applications for my company to support their SAP projects with Volkswagen and Audi. I also built the company homepage, several internal tools and helped build and maintain a server cabinet.

Software packages and languages used: PHP, MySQL, XHTML, CSS, Photoshop and MS Office.

Interests

I enjoy photography, computers, travel, Formula 1, working out and learning world languages.

References

Available upon request.