

DEVIN BAYER'S

# Holistic Computing Agency

PROGRAMMING / OPERATIONS / RESEARCH

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## HIGHLIGHTS

- 16 years of professional experience on general computing projects
- Developing and operating large important systems, including:
  - **K-root**, one of the internet's 13 root DNS servers
  - the data pipeline for Fermilab's Tevatron, the largest particle accelerator before CERN
- Contributions to about 100 open source projects. Some recent examples on [my github profile](#).

## INTRO

My goal is to find better methods of producing and maintaining large software systems. Almost all my life, I've been knee deep in a computing project or two, from assembling bits to mobile apps to huge data pipelines. So I'm not a specialist in anything, but have a good sense of how to approach a problem and can adapt quickly. My ideal is modest, un-clever architectures designed

for humans. If I should be found racking servers that's fine; if creating a new language is the right way forward, great! I enjoy doing code reviews and accepting criticism. The biggest obstacle I see to good products is ego and I think ideas should be disconnected from people. Between freelance assignments I spend my time playing with my own projects or just researching one of my other interests.

## IN...

## I WORKED AS A...

## USING...

2014 →  
Now

**INFORMATICS RESEARCHER**, aiming towards a future of more human, more effective computing, with a focus on an increased capacity to handle a large variety of data and software systems.

a bit of everything, but a lot of Python and custom DSLs



Publication: [Flying Disc Emoji Proposal](#) (2016), a new emoji for my favourite sport. Accepted by Unicode Consortium and arriving on phones in late 2018.

2018

**BACKEND DEVELOPER** for **SPAAZA TECH BV**, performing maintenance and modernisation to their microservice and serverless architecture.

Go                      AWS  
ElasticSearch      Lambdas

2017

**DATA ENGINEER** for **GREENPEACE**, building a new pipeline with a business intelligence UI to understand how their users work.

Python                      GCE  
BigQuery                      Kubernetes

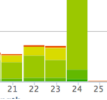

2016

**SOFTWARE / SYSTEMS ENGINEER** for **IRDETO**, a leading global security provider. My tasks were:

- scaling and automating the deployment of their video watermarking service
- developing a new reactive web portal

Python                      Angular  
Meteor                      Docker  
AWS                      Ansible

continued...

IN...	I WORKED AS A...	USING...
2015	<b>SOFTWARE / SYSTEMS ENGINEER</b> for <b>SANOMA MEDIA</b> , improving a portal to the clouds for facilitating a transition to their private datacenter, technical negotiation with vendors, developing the portal and better processes, like reviews and true CI.	Java Puppet JS/React VMWare OpenStack Win 2012 AWS Django
2014	<b>DEVELOPER</b> for <b>RADICALLY OPEN SECURITY</b> , on the design of an open source anti-DDoS solution under an NLnet grant.	Perl NetFlow PHP nfsen
2010 → 2014	<b>SOFTWARE, SYSTEMS &amp; DATA SCIENTIST</b> for the <b>RIPE NCC</b> as part of an elite team that managed over 200 systems at over 30 global sites including k-root, a critical piece of Internet infrastructure. We also developed datasets for a large Hadoop cluster and a highly dynamic web UI. On top of that we had a bunch of legacy responsibilities, but managed to meet our goals with good prioritisation and automation.	DNS Juniper Python Redhat CFEngine Hadoop MySQL Cisco Netflow Java Ansible Slunk
	Publication: <a href="#">Visibility of Prefix Lengths in IPv4 &amp; IPv6</a> (2010), a study of the how network size affects global routability.	
2008 → 2010	<b>SOFTWARE ENGINEER &amp; TRAINER</b> for <b>PORTAONE</b> on various aspects of their VoIP solutions, including customer training, coordinating development and implementing a distributed billing engine.	C / C++ RTP Python Java Perl Oracle
2006 → 2008	<b>SYSTEM ENGINEER &amp; HACKER</b> for <b>THE GAMBIA COLLEGE</b> , where I had a variety of tasks in a challenging environment: <ul style="list-style-type: none"> <li>- setting up a 200 PC network</li> <li>- customising FOSS solutions for the library and internet cafes</li> <li>- teaching basic computing classes to complete novices</li> </ul>	Win 2003 Ruby Java Win '95 DOS PHP Postgres MS Office x86 assembly
	One my most memorable bug fixes was had here, tracking down an integer overflow in the SYSLINUX boot loader for certain disk sizes.	
2005 → 2006	<b>APPLIANCE ENGINEER</b> for <b>CAI NETWORKS</b> , mostly independently launching a new global load-balancing appliance.	Busybox uClibc Redhat DNS
2003 → 2005	<b>RESEARCH PROGRAMMER</b> for <b>THE UNIVERSITY OF ROCHESTER</b> , where I had the privilege of building a data routing solution for Fermilab's Tevatron and a UI for a muon detection device.	IRIX C / C++ GTK ROOT
2003 → 2005	<b>ALL-AROUND FREELANCER</b> on <b>RENT-A-CODER</b> , picking up gigs for desktop apps, drivers, system roll-outs and related projects.	C / ObjC Java Ruby macOS
2002 → 2003	<b>MOBILE DEVELOPER</b> for <b>TRANSPORTATION SYSTEMS PLANNING</b> in my hometown of Lebanon, NH. The start of my pro career.	Ruby Palm Debian Postgres
2000 → 2002	<b>SYSTEM ADMINISTRATOR</b> for <b>ELEKTRONO FREE SHELLS</b> , a publicly accessible multi-user Linux environment run out of my home. To be honest, it was mostly IRC bots.	Linux IRC Ruby Bash