

Dieter Buys

SOFTWARE ENGINEER · DEV OPS

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Summary

Software Development Professional with over 18 years of experience. Passionate about finding ways to leverage technological innovation for the good of humanity.

Skills

Programming	Python, Javascript, C/C++, Go
Front-End	React, Electron, NodeJS, HTML, CSS
Back-End	FastAPI, Flask, Django, SQLAlchemy
Database	MongoDB, Elasticsearch, DynamoDB, PostgreSQL, MySQL
Dev Ops	Terraform, Ansible, Docker, Kubernetes, Jenkins, Prometheus, Grafana

System Administration Unix, OSX, Bash, Nginx, Apache, Tomcat

Mathematics Calculus, Linear Algebra, Probability & Statistics, Computational Geometry

Communication Public Speaking, Business Writing, Documentation

Education Tutoring, Mentoring

Work Experience

Tally Inc.

Remote

CONSULTING SOFTWARE ENGINEER

Feb 2021 - Oct 2021

Tally Inc. is a financial automation company that provides consolidation and repayment assistance for credit card debt.

- Handled migration of primary website (www.meettally.com) from in-house Wordpress to Contentful managed by a subcontractor.
- Drove the upgrading of the website from hand-crafted EC2 instances to ECS cluster defined in Terraform, with much improved availability, security, observability and maintainability.
- Mentored intermediate engineer and assisted in her task of consolidating the company's 5 VPNs down to 1.

HSBC Digital

Vancouver & Remote

CONSULTING SOFTWARE ENGINEER

Feb 2018 - Feb 2021

HSBC Digital is the division of HSBC International that develops and operates the HSBC mobile application (with over 1.34 million users globally), websites & web applications, and R&D for various digital innovation products.

- Responsible for operating, evolving and scaling the CI/CD pipeline for the HSBC cross-platform mobile app supporting over 60 developers 24/7/365 across 4 time zones, producing over 1,000 builds a day for 43 locales using a hybrid Jenkins cluster with more than 100 nodes.
- Developer and maintainer of custom tooling for developers, managers and bankers to streamline development and enhance product quality.
- Hired and trained engineers to meet the unique security and regulatory challenges of the banking sector as well as the enormous organizational scale at HSBC.

Urthecast Inc. (now Urthedaily Analytics)

Vancouver

SENIOR SOFTWARE ENGINEER

Oct 2015 - Feb 2018

Urthecast owned and operated 4 advanced orbital optical sensors (2 satellites and 2 on the ISS) to provide scientific-grade satellite imagery for agriculture, science, urban planning, insurance, intelligence and other applications. As one of Canada's largest aerospace companies, they were also leaders in developing a scalable optical data processing pipeline and a platform for delivering geospatial data from a vast catalogue spanning a diverse set of sources.

- Key contributor to the planning, architecting and development of the next generation optical processing pipeline, data repository, calibration and validation system and testing framework. This was in anticipation of the next generation optical sensors that will generate several terabytes of data per day.
- Co-authored a successful proposal worth \$1.1 million for the Canada's Innovation Supercluster initiative, a public-private-academic partnership involving Urthecast, the University of Victoria and Microsoft Canada to define a new standard for integrating diverse geospatial data into a single platform to democratize access and facilitate innovative research.
- Contributed significant code to enhance the architecture of the optical processing pipeline. Also implemented a reprojection & tiling subsystem for sensor cross-calibration.
- One of two engineers assigned to take over the legacy data platform from the Urthecast office in San Francisco. I became a maintainer of the back-end services, the web application and the data packaging service, to which I made significant improvements including a 4x reduction in storage cost and 2x increase in resampling performance.
- Co-developed an automated process to migrate more than a petabyte of indexed geospatial data from raw data on S3 to a compressed format with an archiving system based on Glacier and S3.
- Provided mentorship both formally and informally to several other engineers in the areas of software engineering, object oriented design, advanced use of the Python programming language and technical writing for documentation and presentations.

Marketing.AI (now Mintent)

Vancouver

LEAD INTEGRATION ENGINEER

Apr 2015 - Jul 2015

Marketing.AI provides a Content Marketing Platform & Analytics FIXME FIXME FIXME

- Maintained and implemented deep integrations between the platform and Facebook, Twitter, LinkedIn, Wordpress, Marketo, Google Analytics and others.
- Solicited feedback and requirements from select clients & presented at Marketing.AI's symposium in Las Vegas.
- Also implemented dynamic report generation and exporting to PDF.

Demonware (part of Activision Blizzard Inc.)

Vancouver

SENIOR SOFTWARE ENGINEER

Oct 2013 - Jul 2014

Demonware provides the back-end services for many of Activision's AAA titles including the *Call of Duty* and *Skylanders* series representing tens of millions of users.

- Contributed to the design and implementation of the next iteration of web services for matchmaking, stat tracking, authentication on Xbox Live and Playstation Network as well as cross-platform data services for the *Call of Duty: Advanced Warfare* and *Call of Duty: Ghost* mobile application and website.
- Also contributed to the infrastructure code and operation of the *Diablo 3: Reaper of Souls* back-end web services.
- These services are RESTful web APIs that routinely handle thousands of requests per second and withstand frequent denial of service attacks and hacking attempts.

Popcap Games (part of Electronic Arts)

Vancouver

SENIOR SOFTWARE ENGINEER

Jan 2011 - May 2013

Popcap games was a major casual gaming company, the makers of *Candy Crush* and *Plants vs Zombies*. In 2011 Electronic Arts acquired them for \$1.2 billion, and as part of that acquisition a new studio was formed in Vancouver to develop a portfolio of browser-based hidden object games.

- Contributed as senior software engineer to game *Hidden Agenda* including an isometric renderer, numerous gameplay mechanics and deep integrations with social media and e-commerce services.
- Developed interactive graphical tools for the designers and artists to create content for the game and trained them on their use.

Vivify Labs Inc. (now part of Rosetta Stone)

Vancouver

SOFTWARE ENGINEER

2008 - 2011

Vivify Labs developed and operated a portfolio of "brain training" games that exercise various forms of cognition such as memory, vocabulary, arithmetic, deductive reasoning, etc. These were integrated into a web-based stat tracking and analysis system. It had a userbase of over 20 million users. Vivify Labs was acquired in 2013 by Rosetta Stone for \$12 million.

- As a software engineer I developed several mini games for the portfolio in collaboration with the designers and artists. I was also responsible for server administration, database schema design & migration and RESTful API development.

Threewave Software Inc

Vancouver

JUNIOR SOFTWARE ENGINEER

2006 - 2008

Threewave Software was a video game development studio that specialized in multiplayer AAA titles for the PC, Playstation 3 and Xbox 360.

- Contributed significant gameplay and rendering code to the *Ghostbusters* video game including AI, physics, rendering, gameplay logic and heads-up display.
- Implemented heads up display features and debugging for EA's AAA title *Army of Two*.
- Developed several experimental web-based game prototypes and tools.

Education

University of British Columbia

Vancouver, British Columbia

B.S. IN COMPUTER SCIENCE

2002-2006

- Led a student programming & design team to reconstruct classical architecture in Unreal Engine & served as a teaching assistant in a *Greek History 100* course utilizing this technology.
- Developed a bespoke web application for the Department of Anthropology at UBC.
- Attended graduate school Computer Science classes in Computational Geometry and Character Animation while an undergraduate.

Amazon

AWS CERTIFIED SOLUTION ARCHITECT – ASSOCIATE

2017