



# Vincent van Haaff

vvh.io | vincent@vanhaaff.com | 778.819.8605

## Summary

I am a passionate technical creative and engineer with over eighteen years of commercial experience and full-stack skills in the design, development, and maintenance of modern, user-centered tech-driven products and services. I also create engaging experiences for installation and video games on both the web and console, with a strong interest in performance, engagement, clean efficient code, and accomplishing it with a strong team.

Besides work, I am a co-founder of Vancouver Maker Faire as well as Vancouver Hackspace and others. I am an educator, artist, and mentor living in Vancouver. I love climbing, cycling, good eats, and good times!

## Experience

### a flyingoctopus consulting

*Creative Director/Co-founder | November 2010 - August 2024*

- Introduced improvements to systems and hardware enabling clients to reach their goals. Clients such as *Vancouver Airport Authority, Hewlett Packard, O'Reilly Media, Science World, Emerson Connect, Canadian Border Services Agency, and U.S. Customs & Border Patrol.*
- Focused on rapid **computer vision** solutions and hardware prototypes with a focus on **biometrics** and **machine learning**.
- Guided clients through product and business development cycles, utilizing **Agile** methodologies.
- Leveraged devOps and CI/CD pipelines **to bring technical teams to the finish line.**
- Established technical and project management infrastructure, including version control, data analysis, and documentation processes.

## Skills

### Engineering direction:

User\_Experience\_Design,  
Product\_Design,  
Systems\_Engineering,  
Data\_Visualization,  
Startup\_Consulting,  
Data\_Driven\_Intelligence,  
Behaviour\_Design

### Programming languages:

C, C++, Rust, Ruby, Golang, Swift,  
Python, TensorFlow, Node, CUDA

### Web development:

HTML, CSS, JavaScript, React\_js,  
WebGL, Webpack,  
OpenFrameworks, Processing

### Frameworks tools:

Rails, Django, CQRS, Docker

### Databases:

MySQL, Postgres, SQLite,  
MongoDB, Redis, Salesforce,  
Eventstore

### Testing debugging:

Shoulda, Cucumber, RSpec,  
Test::Unit, Selenium, gdb, LLDB,  
PyTest, pdb, GoTest, Delve,  
CargoTest, Clippy

### Software design architecture:

ActiveRecord, Sequel, CQRS,  
Microservices

### Infrastructure:

Kubernetes, Docker, Kafka,  
Zookeeper, Elasticsearch,  
Logstash, Kibana, Terraform,  
Ansible, Jenkins, GitHubActions,  
AWS, Azure, Prometheus, Grafana

### Version control:

Git, Perforce, Subversion

### Servers deployment:

Nginx, Apache, AWS, HuggingFace,  
Azure



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## **Synervoz Communications Inc.**

*Senior Embedded Software Engineer | June 2023 - April 2024*

- Crafted embedded firmware and infrastructure for an AI-driven audio DSP project on the Xtensa platform.
- Produced real-time embedded software for next-gen Bluetooth earbuds.
- Enhanced audio DSP pipeline reliability with low-level drivers and middleware in C.
- Conducted system debugging, maintained code quality, and provided detailed technical documentation for project stakeholders.
- Delivered project requirements on time ensuring *client satisfaction*.

## **FarmLink Marketing Solutions**

*DevOps Automation/Quality Assurance Engineer | June 2021 - October 2022*

- Supported pivot from financial newsletter for grain farmers to full-fledged ai-driven SaaS platform.
- Assembled and upheld GitHub Actions-centered development pipeline.
- Wrote automation and integration tests; including documented information architecture for the project.
- Managed a team of junior QA hires to achieve 100% test coverage.
- Met and exceeded stakeholder expectations.

## **Fluency Labs Inc.**

*Technical Lead | January 2018 - October 2020*

- Constructed distributed computing framework for cloud-native applications with decentralized features.
- Launched and scaled Kafka/Zookeeper/Akka/Atom Kubernetes clusters for IoT data ingestion.
- Developed C++ libraries for distributed actor-driven systems.
- Mentored junior developers.
- Successfully deployed IoT data ingestion solution for Smart City pilot program for Park City, Utah.



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## **Xeraflop Technologies Inc.**

*Senior Software Generalist | April 2017 - January 2018*

- Adapted self-service and point-of-sale payment terminals with new biometric verification and e-commerce capabilities required by the new customer base.
- Migrated a Ruby on Rails monolith to an Eventstore-centric CQRS microservices architecture, optimizing cluster performance with Golang on Kubernetes.
- Designed front-end toolchain for a migration from Angular.js to Node/React.
- Deployed microservices solution for the Washington State Liquor and Cannabis Board tracking of legal cannabis sales and production.
- Facilitated company growth by increasing client base and SaaS cloud offerings.

## **Vancouver Airport Authority**

*Biometrics R&D Lead | March 2016 - July 2017*

- Incubated an R&D lab from the ground up to modernize automated border control kiosks globally. Led the team and leveraged modern biometrics techniques to fulfill requirements from border services & other government agencies.
- Wrote automated test pipelines and evaluated optical system performance for biometric systems. Ensured accurate and reliable functionality for a wide scale of *internationally deployed* units to other airports.
- Oversaw fabrication of kiosk case and custom hardware as well as prototype assembly.
- Steered through design problems and resolved issues in a timely manner.

## **David Suzuki Foundation**

*Data Evangelist | November 2015 - December 2016*

- Implemented bulk data import processes and Salesforce tooling, integrating all SaaS products and creating data reporting tools for an internal digitization mandate.



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- Identified stakeholder requirements and formulated proposal for backups tooling rework, reducing non-profit overhead and optimizing team performance.

## **tzoa dot com**

*Hardware/Data Consultant | September 2015 - March 2016*

- Wrote firmware and mobile apps for air quality trackers, developing Bluetooth communication protocols and testing hardware/software communication.
- Assisted customers in planning their activities and protecting their health.

## **rouxbe dot com**

*Interim CTO | September 2014 - September 2015*

- Managed DevOps and implemented new features for an online culinary education platform built on Ruby on Rails and Node.
- Handled scaling of servers seamlessly while adding Whole Foods as a client for our culinary education offering, doubling our viewership through increased capacity.

## **Hybridity**

*Product Development Advisor | June 2014 - September 2015*

- Wireframed and executed backend business logic for a multi-platform mobile app.
- Integrated computer vision and HCI features.

## **crossfader dot fm**

*Co-founder, Chief Technical Officer | September 2013 - September 2015*

- Created a popular music production and community platform for iOS.
- Built a robust track recommendation engine and supported the engineering team by contributing real-time DSP editing features when needed.



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- Provided HR and Backops support during startup growing pains.
- Grew the team from three to 50 employees and managed back-office operations and HR in the first year.

## Graffiti Research Lab

*Software Lead/Interaction Consultant | February 2013 - November 2014*

- Drafted networked real-time projected graffiti systems in Java.
- Wrote blob detection/computer vision software and various shaders for graffiti emulation.
- Installed required hardware at the Woodward's W2 building in Downtown Vancouver to be networked in real-time to similar installations in Seoul, South Korea, and Berlin, Germany.
- Highly popular interactive graffiti exhibitions deployed internationally.

## Coverall Crew

*Software Lead/Platform Specialist | August 2012 - August 2014*

- Oversaw the development of a white-label online ticketing service, creating a full-stack web product and a database layer using Ruby on Rails and MongoDB.

## eatART Labs

*Event/Installation Coordinator | January 2012 - November 2015*

- Provided interactive installation art for events leveraging real-time GLSL graphics shaders, computer vision, and custom hardware controllers.

## weelooms dot com

*Co-founder | January 2013 - August 2014*

- Created tablet-dock/robot/conferencing assistant software and firmware, leading the tech team to create a virtual assistant platform for Android.



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## **Eco-clix/Adrena LINE Zipline Adventure Tours @Sooke**

*Hardware/Software Developer | August 2010 - June 2011*

- Fabricated kiosk and camera systems for photo capture and sharing, developing weatherproof cameras and motion sensors.

## **monome**

*Firmware Developer | January 2009 - December 2011*

- Developed digital music instruments and synthesizers for the monome community.
- Built generative interface applications and embedded firmware for multi-architecture chipsets.

## **Microsoft/BigPark**

*Senior Software Developer II | August 2008 - May 2011*

- Worked with incubation team on the Xbox Kinect and Xbox 360 platforms.
- Integrated social features and created sound effects for online gaming.
- Sold 8 million devices in 60 days.

## **Acknowledgements & Affiliations**

- Stanford CCRMA Fellow
- El Camino Math Olympian
- Co-founder of Vancouver Mini-Makerfaire
- Co-founder of Vancouver Hackspace
- Co-founder of Aurora Digitalis