Vincent van Haaff

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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 backops 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 Woodwards 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