



VINCENT VAN HAAFF

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Skills Summary

I am a passionate technical creative and engineer with nearly 15 years of commercial experience and full-stack skills in the design, development and maintenance of modern, user centred tech driven products and services. I also create engaging experiences for web, mobile, new media, and console. I also with a strong interest in performance, engagement, clean client code, and accomplishing it with a strong team.

Experience

a flyingoctopus

Creative Director/Co-founder | Nov 2015 - Present

Facilitated interactive new media productions & art installations for clients in both the public and private sector.

- Rapid product deployment with C++/openFrameworks, p5/java, & Unity
- Rapid hardware prototyping using C/Arduino
- Consulted with clients with concept direction and product deliverables.
- Fabricated PCB & hard materials using Eagle, Solidworks, and Slic3r (python).

Vancouver Airport Authority

Biometrics R&D Lead | Mar 2016 - Jul 2016

Contract to incubate and build team and process for evaluating technical solutions and limitations for provisioning new IEC and NIST standards in iris biometrics using advanced computer vision and lighting techniques for governmental port of entries in over 51 countries.

- Built and directed team required to build out R&D lab to modernize automated border control kiosks around the world.
- Launch test pipeline policies & procedures required to meet new CBSA & CBP PIK requirements
- Wrote automated test pipeline & toolchain for light sensor & lens performance (openCV2)
- Built scientific testing process for empirically evaluating optical system performance.

David Suzuki Foundation

Data Evangelist | Nov 2015 - Mar 2016

Responsible for data health and management, analytics, and business intelligence built on Salesforce.

- Integrated all SaaS products into Salesforce
- Made data reporting tools for campaigns
- Converted & organized legacy data to SF
- Created data-entry pipeline for volunteers

tzooa.com

Hardware/Data Consultant | May 2015 – Present

Firmware and mobile app development for air quality tracker. Based on rduino spec on custom PCB layout/BLE2.1 design for Bluetooth-enabled air quality tracker.

- Created communication protocol in BTLE3
- Created boilerplate Android app
- Tested hardware/software communication
- Created communication prototype for testing

rouxbe.com

Interim CTO | Sept 2014 – Sept 2015

Custom Content & Learning Management System for online culinary education built in Ruby on Rails & Node.

- Managed tech team of 3-5
- Evaluated tech feasibility of new products in Cordova
- Monitored VPS server architecture in Docker
- Prototyped mobile LMS platform in Swift

crossfader.fm

Co-founder | Sept 2014 – Sept 2015

Co-founded and bootstrapped iOS music production software and community platform.

- Wrote mobile circular buffer for real-time DSP editing
- Created track recommendation engine based on donated iTunes Match data using Bayesian networks (Hadoop/Ruby/Objc)
- Grew a student-teacher project into a 15 employee studio.
- Designed product around unique customer growth model to create

Hybridity

Technical Director | Jun 2013 – Sept 2014

Consulted and integrated multi-platform native mobile app (iOS/Android) with a community-persistence featured back-end for mobile app IP. Additional work spanned from installation-art technical direction and component testing focusing on Computer Vision and HCI.

- Designed & developed backend business logic layer in (objc, CoreData, & Parse)
- Created prototypes to evaluate GLSL shader performance on the iOS & Android platform
- Implemented computer vision features using openFrameworks & objective-C

Coverall Crew

Software Lead/Platform Specialist | Aug 2012 – Aug 2014

Technical Lead for bootstrapping software as a service in Ruby on Rails & Backbone.js. attendease.com.

- Created technical release cycle roadmap
- Implemented full stack web product (Ruby on Rails/coffeescript/backbone.js/haml)
- Implemented database layer using non-relational database technology (mongoDB)

Graffiti Research Lab

Software Lead/Interaction Consultant | Aug 2013 – Aug 2014

Computer vision and interaction design of networked real-time projected graffiti for PWN The Wall installation at W2 Woodward.

- Wrote Java server to handle communication of multiple instances of graffiti client
- Wrote Java client to convert IR light blob detection into parsable udp packets (openCV2)
- Created GUI to render graffiti paths & various types of brush stroke styles

eatART Labs

Event/Installation Coordinator | Aug 2012 – Aug 2015

Create compelling, interactive three-dimensional art pieces for site-specific fund-raising events for eatART Labs.

- Wrote real-time GLSL graphics shaders that respond to various inputs such as sound & midi values.
- Built controller hardware designed specifically to control multiple host machines controlling up to 1024 lighting and projector parameters
- Created & developed brand styling for various event campaigns & fund raisers.

weelooms.com

Co-founder | Aug 2012 – Aug 2014

Designed tablet-dock/robot/conferencing assistant software and firmware.

- Bootstrapped tech team to develop a virtual assistant on the android tablet platform
- Established robotic tablet dock hardware spec to outsource for rapid prototyping & fabrication.
- Prototyped the first pass at natural language processing using various c++ dsp libraries and python.
- Developed and maintained the virtual box instance of the entire deployment pipeline.

monome.org/aleph

Hardware/Firmware Designer | Aug 2012 – Present

Full stack designer/developer for digital music instrument and synthesizer. Key responsibilities involve PCB development, Interactive Coding Environment for Software Developer kit development, app module architecture & development in C. Embedded firmware programming for multi-architecture chipsets.

- Built initial PCB prototype for hardware interface using chemical-etching & GNUplot
- Progressed application ecosystem by building basic generative interface applications on various development platforms (Max/MSP, Chuck, Processing, node.js, python, java)
- Firmware development for AVR32 based sound processor & DSP
- Community management and admin of GitHub project to promote good code and a healthy open-source commit culture.

Eco-clix/AdrenaLINE Zipline Adventure Tours @Sooke

Hardware/Software developer | Aug 2010 – June 2011

Kiosk & camera system designer. Camera challenges included solar powered charging w/ inverter, wireless transmission of photos via secure remote WiFi networks, automated photo capture system using pixel differentiation and thresholds to validate subject is in-frame. Kiosk challenges included touch-based hardware-platform software development, payment system, kiosk to email/social media publishing.

- Wrote Ruby on Rails web-based rich kiosk application for photo capture, purchase and sharing.
- Prototyped weatherproof camera, motion sensor, and wireless network to send photo to kiosk.
- Managed product requirements with client to build a robust and agile product release schedule

Microsoft/BigPark

Senior Software Developer II | Aug 2008 – May 2011

User experience designer and software engineer for Xbox Kinect Incubation team as well as Sound Designer for online gaming. Responsibilities involve User Experience prototyping for the Xbox Live platform using the new computer-vision hardware device as well as software development for internal Microsoft Kinect libraries for video game development.

- Developed prototypes & tech-demos for Incubation team (Flash/as3/javascript/cpp) for the xbox 360/kinect and web-based platforms.
- Front End development for free-to-play flash games using Flex/as3
- Recorded and produced sound effect for free-to-play web tower defense game.
- Integrated social features with facebook app api & other platform specific requirements.

Tangible Interaction

Software Lead/Platform Specialist | Aug 2009 – Aug 2010

Consulted for Graffiti Wall & kiosks found through out the lower mainland & Digital Media Room during the 2010 Winter Olympics.

- Designed TUIOOSC/Java server architecture
- Created GPU-particle emitter in AS3
- Tested custom network OSC protocol AS3/Java
- Co-designed overall HCI for art piece

monome.org

Embedded Systems Programmer | Nov 2003 - Present

Original developer for USB to Serial firmware implementation for originally designed interface hardware.

- Wrote interaction software for music (MaxMSP/Java)
- Prototyped hardware in C/Arduino
- Evaluated hardware components for use in production hardware
- Coordinated marketing outreach to other artists to use hardware

Acknowledgements & Affiliations

Vancouver Mini-Makerfaire Co-founder

Co-founder of annual family-friendly event showcasing Vancouver's Maker Movement (makerfaire.ca). From tech enthusiasts, metal artists, homesteaders, painters, potters, 3D printing enthusiasts, knitters, roboticists, Makerfaire.ca brings Vancouver's DIY enthusiasts under one roof.

Co-founder of Vancouver Hackspace

Co-founder of hackspace.ca, a physical space where people can gather to share ideas, equipment, opinions, and beer. Members work on personal projects, collaborate with others, and learn new skills. More than just a studio space, we focus on sharing all sorts of knowledge within a friendly and collaborative atmosphere.

Co-founder of Aurora Digitalis

Co-founder of Aurora Digitalis, a non-profit society that curates art shows, public art engagement as a collective cooperative for new media artists.