Rob McLarty DRAFT

Digital Experience Creator

I work primarily to develop innovative web applications, apis, and secure information systems with an aim to make digital tools that leverage human/computer interactions to realize the needs of business through ethical software implementations. I want to make things. I want to learn things. I want to share things. I want to solve technical problems using creativity, ingenuity, and critical thinking. I want to design architectures and techniques; build them, test them, iterate on them; and teach others how to use, maintain, and extend them. I want to work on the full-stack from sketching on napkins down to wiring together secure cloud infrastructures. I want to build re-usable tools and modules and methodologies that will benefit the whole team.

I have built products at startups, consulted at enterprises and SMBs, and run my own businesses. I have a background in cognitive science + AI, philosophy, graphic design + illustration, applied research, and creative technology. I'm best suited to solve unique problems that don't fit neatly into a prescribed box (I thrive in the unknown, tailoring solutions to custom contexts). My best skill is my ability to see the big picture and connect ideas and concepts across problem domains. This has enabled me to architect and implement interfaces that are both usable and practical (in terms of business value versus development complexity). I want to establish the tone and set the pace and design the plan, to guide teammates and peers to create better solutions, and to inspire those around me.

What am I?

Technologist: Software Design + Development, Architecture, Security, Testing, Refactoring, Integration, Evaluation

Artist: Illustration, Design, Writing, Motion Graphics, Photography, Fine Art, Aesthetics

Teacher: Visualization, Presentation, Documention, Discovery, Communication

Leader: Processes, Reviews, Hiring, Business Strategy, Balancing Tradeoffs, DEI, Coordination, Mentoring

Researcher: Always Learning, Reading, Experimenting, Testing, Prototyping, Synthesizing, and Writing

Experience

Principal Software Engineer, WorkTango

2019-2022

- created front-end client application architecture using a variation of hexoganal structure and isolated state machine
- created back-end server architecture as well as its surrounding infrastructure architecture and setup the implemention on AWS using docker containers, public/private subnets, bastion host, TLS, redudant database, cache, CDN, and monitoring systems
- lead hiring new engineers, designers, and project managers as company grew from 10 to 50 employees
- created company documentation with visualization diagrams/charts and supporting videos and animations to help communicate complex information and help onboard new developers and guide the whole team along a coordinated path
- lead major 2 year refactor of entire tech stack and designed and implemented a plan to integrate redesigned modules alongside existing legacy code while continuing to add new features such that the app could progress from v1 all the way through v3 on a single main trunk ensuring the app continued to work for customers while new features came online
- mentored junior developers, lead internal security committee, and oversaw code reviews to help guide teams using new architecture
- handled some front-end application ux/ui design work until we were able to hire a dedicated designer
- developed team processes to enhance the development flow from identifying business and customer needs through prototypes, graphic design, software coding, testing, and quality assurance
- kicked off developing company documentation systems, styleguides for writing articles and sharing knowledge internally that enhanced understanding and overall productivity

Staff Software Engineer, Myplanet
2015-2019

- in charge of special experimental application development for Telus which they used as prototypes and proofs of concept for bigger rollouts such as Technician Service Management, Telus Health, and VoIP all certified by 3rd party researchers as "privacy by design" and of the highest security standards (especially important for sensitive information such as health data)
- worked with managers at Telus to help develop concepts taking their initial idea and creating working software, UIs, servers, and innovative teachnologies that could then be built upon by their teams to roll out larger scaled versions to the public
- worked with Newstore to develop highly scalable AWS infrastructure and architectures to handle PoS and Omni-channel shopping for various customers across over 50 countries
- worked with Apple to develop responsive/mobile web UIs for their internal employee management systems
- lead Myplanet security comittee, hosted seminars on code practices, privacy, and security, developed company documentation systems to make finding already-learned information efficient and easy

- provided on-site technical support to our biggest clients' software teams in Berlin, London, and Boston

Senior Software Engineer and Designer, Verold
2013-2015

- in charge of design, development, and infrastructure for community web app (we had 3 main stacks: 1. 3d editor, 2. 3d api/server, 3. community app) using Rails, Heroku, and
- created user management system, security, integration with other apps, monitoring systems, community gallery, 3d project previews, and social technologies
- worked with team members working
- handled UI/UX design of community site until we grew big enough to hire a dedicated designer
- helped with UI/UX for 3d editor app, as well as any implementation jobs that required more hands
- advised on business strategy, software architecture, coordination between teams, and technology choices
- created demo apps built up on our 3d platform such as games, data visualizations, and external vendor integrations (e.g., Amazon Fire, Occulus, Magic Leap)
- worked with business customers to help with their own app's development using our 3d platform

Principal Software Engineer, Overdrive
2011-2013

- in charge of all technology efforts: software development, archive processes, hardware acquisition and management, teach staff, and hiring/onboarding new engineers
- worked with desginers to develop innovative app solutions, helping them understand what possibilities were available as well as supporting their ideas to help realize their interactive concepts
- advised on technical strategy for the company, as well as for our customers, to provide options to consider the tradeoffs and possibilities
- handled programming tasks developing many new web apps and infrastructure architectures for different clients using a combination of technologies such as Rails, Flash, and JS
- developed interactive kiosks for use in the Royal Ontario Museum's Burgess Shale and Mineral Gallery exhibits, along with internal monitoring systems that helped the museum visualize the usage of those kiosks to help them make business decisions about them
- developed uniqe mobile web app for Co-op cabs that enabled customers to hail a cab from their phone, monitor real-time GPS progress on a map of the cab assigned to their call, and provide feedback after the trip (think Uber before Uber); integrated modern web systems with their legacy SOAP api that integrated with their dispatch system

Co-founder and CTO, Philosophy Factory

2006-2011

- custom e-commerce websites for Evokative Films, Muskoka Roastery, Arbopals, Pure Fun, and Sportacular Events
- live bike race results for Tour d'Afrique (race from Cairo to Cape Town)
- mobile video games for kids for brands like Kellogs, Conegra, Tanqueray, and
- portfolio websites for local photographers and artists
- project management app for film production company
- custom ui/ux designs and software development for other software-focused firms (Blackhat, Overdrive, Leo Burnett)
- custom online video games Arbopals, Kellogs, Tanqueray, Gogos
- photography (weddings, events, products)
- consultation, creative problem solving, automation, interactivity, communications, data integrity

Formal Training

Solutions Architect, Certificate, AWS
2017

Illustration + Graphic Design, Diploma, Sheridan
2000-2003

Philosophy + Cognitive Science, BA, UofT
1997-2000

Community Volunteering

Director of Technology, MTBCO
2023-present

Open Source Developer/Maintainer (see selected projects below)
1997-present

Ride Leader, Dark Horse Cycling Club
2018-2020

Cycling Safety Advocate, City of Toronto
2015-2020

Technology Instructor, Simcoe County Board of Education
1999-2000

Ski Patrol, Snow Valley Resort
1996-1997

Spoken Languages

English, **French**

Computer Languages

Javascript, Ruby, C, SQL, HTML, CSS, Markdown, Python, Redis, Git, JSON, Sass/Less, Nginx/Apache, Docker, GraphQL, PHP, Bash, Elixir, Pascal, Java, Turing, Actionscript, Perl

Coding Frameworks

Node, Express, Knex, Rails, React, Preact, Redux, Phoenix, Jquery, Jest, Mocha, Selenium, Storybook, MSW, Angular, Backbone, Rspec

Proficiencies

Security/Privacy, Cryptography, Architecture, Authentication/Authorization, Education/Consultation, Design, Team Management, Business/Product Integrations, Wholistic Project Management

Software Tools

Adobe Suite, Affinity Suite, Final Cut Pro, Sublime/Atom/Vim, CLI, Discord/Slack/Teams/Zoom, Notion/Jira/Assana/Basecamp, ChatGPT/Midjourney, Google Suite, Lastpass/1Password, Shopify/Stripe, Twilio, AWS/DigitalOcean/Cloudflare, Github/Gitlab/Bitbucket, Unity/Flash/Unreal, Mixpanel/Datadog

Apps

Employee Pulse Survey, WorkTango

2019-2022

Wellness Messenger, Telus
2018-2019

Phone Collider, Telus
2018

Technician/Service Finder, Telus
2017

3D WebGL Editor + Community Hub, Verold
2013-2015

Mobile Taxi Hailing, Co-op Cabs
2010-2013

Custom E-commerce, Muskoka Roastery, Pure Home Couture, Evokative Films
2010-2013

Online Therapy, Canadian Association for Psychodynamic Therapy
2012

Burges Shale Kiosk, Royal Ontario Museum
2010-2012

Live Race Tracking + Marketing, Tour d'Afrique
2006-2012

Online Video Games, Kellogs, Tanqueray, Conagra
2006-2009

Hockey League Management System, Sportacular Events
2007-2008

Open Source

cred, authentication + authorization for Nodejs apps

soko, cli tools for building and running javascript applications

robchat, e2ee websockets (client + server) chat app

storium, unified cloud storage abstraction for knex apps

paginated-redux, state management for paginated records

suggestible-input, selectable list of fuzzy-matches suggestions

fuzzle, cli tools for static asset name revisioning

crypto-butter, collection of cryptographic functions for web clients

knex api template, example starter api with scalable architecture

Articles

What is a JSON Web Token?

Alternative ES6 React Component Styles

A Good Leader Aligns

Is There Something Better Than Time-Tracking?

Relevance Realization and Dynamic Systems

Reduce Complexity, Not (Necessarily) Code

Stop "Doing Agile"

On Estimating Software and Trying to Predict the Future

Personal Security Tips

Stripe VS Paypal

The Business of Privacy

Deep Learning is Still GOFAI

How I Learned to Stop Worrying and Love the Cascade

JS Dos and Don'ts

Docker is Fun and Easy

Don't Use HPKP by Default

The Creative Process in Software Development

Let's Encrypt With Certbot

Modular App Architecture

Chocolate Paintings (How to Embrace the Unexpected)

Shaping Up: Realizing New Ideas

Redux Strawberries: An Introduction to State Management

A Brief History of Cyptography

References

Ross McKegney, Vice President, Adobe

James Wilson, Principal, Overdrive Design

Dushan Milic, Professor, SCAD

Ilya Schwarz, Creative Director, Electronic Arts