# ­Monte Hayward

Senior Front-End Engineer

5 Years Successful Remote Consulting

monte@monte.io • 650-797-1444 • linkedin.com/in/monte

Software Engineer | Architect | Core Product Developer

Product Development: Global Payments Systems, Artificial Intelligence Apps, Video Search

Startups to Fortune 50 Companies • Global Team Builder • B2B & B2C

Front-End Leader: Employs a mobile-first approach to envision, engineer, and launch scalable software designs. Ensures seamless, empowering end-user experiences & predictable state management.

**Web transaction pioneer**

Developed and bulletproofed a PCI Compliant Web payments app 2 years before Stripe.

Scaled payments system to support peak transaction days that flattened the competition.

**AI results**

Built cognitive video search to accept Natural Language questions, return relevant segments.

Unlocked large deals with rapid AI prototypes.

Architected complex, efficient & reusable front-end systems & APIs.

Product Strategist: Conducts and fosters discussion focused on customer needs. Builds consensus across teams.

Agile Developer: Drives critical go-to-markets in fast-paced companies. Writes and ships code, reviews pull requests, debugs issues, manages risk & mentors colleagues.

Key Collaborator: Brings people together to build shared knowledge, consensus and trust. Helps Product Managers, Product Designers & Software Engineers to work across teams.

Technical: Progressive Web Applications, JavaScript, React, GraphQL, Redux, ES6, ES7, Node, Jest, HTML5, Sass / CSS3, Microservice Architecture, JSON APIs, SQL & NoSQL, REDIS

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| Critical Competencies | |
| React (4+ years), Redux, hooks, eager to work in React Native  Design & engineering of user-facing products  Complex systems, reusable components  Technical strategy & roadmaps for product development­  Data structures and algorithms that perform and scale  Creative problem solving and iterative improvement  Software product launches  Payments system expertise & keen interest in cryptocurrencies | Front-end engineering & API contract design  Responsive Web Design  Troubleshooting, debugging, root cause analysis  Distributed systems | client engineering  Functional and object-oriented programming  Balancing multiple priorities, products, and deliverables  Coaching & mentoring developers  Customer experience satisfaction to drive revenue growth |

Technical Expertise

**Frameworks and generators**: React, Redux, Create-React-App, Gatsby, Node.js.

**Build tools**: Webpack, Babel, PostCSS / PurgeCSS, yarn, npm.

**Architecture that scales**: dynamic client-side JavaScript, CDN hosting and caching, and microservice APIs. Git VCS > simple dependency installs > automated build > pull-request preview > atomic deploy > instant cache invalidation.

**Performant design**: Reduced request round-trips & resource sizes, simplified layouts.

**Performance tools**: PWA audits, bandwidth budgets, CPU profiling, automated code-splitting, CSS3 pruning and image optimization, network profiling.

**Experience and flow design**: Balsamiq, Mermaid.js, Illustrator, Photoshop.

**Standards-based design**: ES6, ES7, HTML5, CSS3, semantic markup, accessibility / a11y, i18n, browser APIs.

**Data handling**: encryption at rest & in transit. PCI-DSS, GDPR and other standards.

**Maintenance**: Renovate Bot, CVE alerts, semver.

**Cloud / Server-side**: normalized API endpoints, cloud compute, continuous release, CDNs, and regional edge caching.

**Testing**: Jest, Chai, Sinon, Mocha, cross-browser compatibility test matrix.

**Utilities**: Bash scripts and Node.js CLI components for transforms, repetitive task automation.

Work Experience

Principal Software Engineer,Greenfield Innovation Group 01/2014 – Present

*Founded to guide technology companies from zero to product launch*

**Clients include IBM Watson, Clutch Analytics / Windhaven, Bloomreach & Kimbia / GiveGab**

Sought by Fortune 50 companies and pioneering startups as an independent contributor, leader, and technical owner of innovative applications. Led design and engineering of consumer-facing products with a mobile-first strategy. Served corporate prospects on 3 continents averaging $25B cap and $8B revenue. Successful execution and management led to 175%+ revenue growth YOY.

Drove technical advances – Reduced tech debt – Developed new products – Led product differentiation

Client: **IBM WATSON** 07/2015 – 12/2018

*An $80B Fortune 50 and Forbes list multi-award-winning company*

* **Developed cognitive Natural Language app to access massive video libraries**. As technical owner, developed a white-label video search application for easy re-branding. Led development, operations, and training. Designed app architecture to perform at scale and integrate with Watson Media platform.
  + **Improved page load time & interaction 10x** using Redux.js and React.js in a single-page application (SPA).
  + Designed and built a modular pipeline to enrich and index metadata in Elasticsearch.
  + **Wrote Slack agent** using Watson Conversation to interact with video collections.
* **Supported $325M product deals with rapid prototypes.**
  + **Shortened technology sales cycle** 4 weeks by establishing a streamlined customer onboarding.
  + Served enterprise giants averaging $25B cap and $8B revenue, including top-5 movers in the software, global mass media, sports and news, international broadcasting, and HR industries.
* **Saved $150K+ in solution engineering time** by originating reusable prototype.

React, Redux, Scss, Node, Responsive Web Design, Progressive Web Apps, client-facing JSON API, Swagger, Travis, Jenkins, cloud object storage, Cloudant (scaled CouchDB), microservice APIs, git

Client: **CLUTCH ANALYTICS** 07/2014 – 05/2015

*A $75M innovative software platform subsidiary of Windhaven*

Enhanced web application user experience in comparison engine, quote, and purchase, with zero / low touch. Reported to COO.

* **Helped turn $1.3M loss into profitability** within a $14B market.
* **Reduced defects per release 84%.** Applied best practices to continuously code, test, maintain and release.
* **Expedited release of white-label application** by providing key components and insights.

JavaScript, CSS3 / Sass, Responsive Web Design, Node, Ember, Elixir, CouchDB, rules engine, git

Client: **KIMBIA / GIVEGAB** 01/2014 – 03/2014

*A $1.3B payments platform*

**Developed ACH (eCheck)** and discount code features to payments platform front-end for large-scale events. Reported to CTO.

* **eCheck saved customers** 3% credit card processing fees, which drove payments system adoption.
* Built out discount code feature to win Chicago Marathon deal and drive platform usage.

JavaScript widgets, CSS3, jQuery, JSON API

Senior Director of Development, Kimbia 09/2013 – 01/2014

Scaled up operations and expanded features to capture new clients while managing 3-10 direct reports globally and reporting to CEO. Developed and optimized front-end flow to accelerate $1.3B / 12M transactions, including a record-breaking $53M day. Directed product engineering SDLC as technical product owner.

* **Introduced novel, market-disrupting** technology.
* **Engineered revenue-generating user experiences** based on business rules analysis and user behavior metrics.
* **Grew and strengthened Lean Agile process** to collaborate with business stakeholders, clients, and subject matter experts. Met external commitments by tailoring lean software development lifecycle.
* **Designed and implemented** i18n localization and multi-currency solution throughout platform.
* **Doubled revenue events YOY**; raised millions and converted 1000s of new signups.

JavaScript, HTML5, CSS3, MySQL, Java, jQuery, RESTful JSON API

Director of Development, Kimbia 08/2010 – 08/2013

Promoted by President to lead software product development. Enhanced shared knowledge of customer needs and product requirements using a whole-company Agile approach. Enabled the organization to surpass growth goals by initiating “social chain giving” workflow, adding peer context to payments and event management.

* **Broke records generating** $14.4M in 17 hours for 900+ non-profits.
* **Established continuous improvement** based on metrics and user feedback.
* **Enforced and validated PCI Level 1 compliance** in all aspects of operations and development.
* **Contributed to $4M venture raise** with technical reviews and due diligence.

JavaScript, HTML5, CSS3, MySQL, Java, jQuery, RESTful JSON API

Senior Software Engineer 01/2008 – 08/2010

Co-engineered secure payments APIs and distributed systems with back-end team. Developed and owned all JavaScript apps.

* **Portable payments app:** Multiplied conversions via proximity to brand & message. Provided highly-configurable user experience paths with conditional questions, scriptable events & complex validation. Powered rapid disaster response with instant fund drives.
* **Advocacy workflows:** Empowered users to achieve geometric expansion via viral advocacy. Enabled users to reach the very edges of their social networks through personalized forms.
* **Accessory modules:** Developed pluggable apps for recurring payments, reporting, and team member lookup.

JavaScript, presenter-first MVC pattern, dependency injection, CSS3, jQuery, RESTful JSON API

Engineer, PLUCK / LEAF GROUP, $75M exit 02/2007 – 09/2007

**Engineered solutions** for social publishing platform customers Condé Nast, Hearst, and Gannet.

JavaScript social media widgets, JSON API & CSS. Debugged server and client. Windows servers with Berkeley DB backend.

User Experience Engineer, WETPAINT / FUNCTION (X), $30M exit 02/2006 – 06/2006

**Constructed** **internet collaboration software** lauded by CNET, TechCrunch, and MIT Technology Review. Built responsive web app features to empower non-technical users to create topic-based communities.

JavaScript, CSS, XHR, RESTful APIs

Senior Software Engineer, SINGINGFISH / AOL, $30M exit 01/2000 – 12/2005

**Positioned startup for $30M acquisition** by engineering a consumer UX and pitch prototypes. Rapidly designed and developed front-end for first-to-market audio / video search [*five years before YouTube*](http://amzn.to/bNUZFN). **Co-authored world standard RSS Media 1.0** with Yahoo! **Developed** **world’s first mobile media search**. Devised a click path recording system to capture user behavior and relevance feedback. Cut ramp-up time for content partners MSNBC, CBS News, Marketwatch, NPR, and Reuters.

HTML, CSS, JavaScript, JSP, Java Servlets, XSLT transforms, XML feeds.

Web Application Developer, HAGGLEZONE / NETMARKET 01/1998 – 01/2000

**Developed web applications to market** an 800K product inventory through auction (Patent US7024376) and negotiation (Patents US7756772, US6035288) platforms.

HTML, CSS, JavaScript, SQL, Java Servlets

Team Lead And Web Site Builder, FREERANGE MEDIA, $32M exit 12/1997 – 01/1998

Bespoke Website engineering for Bay Watch, Swedish Medical Center, and Advanced Interactive Systems.

WEB PRODUCTION SPECIALIST, ICAT CORPORATION, $42M exit 08/1996 – 10/1997

**Drove web application development & UX** for pioneering eCommerce software, enabling merchants to create stores that sell.

Education: Master of Biomedical Visualization, University of Illinois at Chicago

Thesis: Computer-based training for health concepts. Research: facial recognition & age-progression

Bachelor of Fine Arts, Natural Sciences Minor, University of Illinois at Urbana-Champaign

Patents: Method of Sizing an Embedded Media Player Page, EU Patent [EP 1350392 B1](https://patents.google.com/patent/EP1350392B1)

Method of Disseminating Ads Using Embedded Media Player Page, [US20120215599A1](https://patents.google.com/patent/US20120215599A1)

Methods & Systems for Collecting Data for Media Files, [US7849160B2](https://patents.google.com/patent/US7849160B2)

Systems and Methods for Rendering Content, [US9454775B2](https://patents.google.com/patent/US9454775B2/en)

Method of Collecting Data Using an Embedded Media Player Page, [US20040051812a1](https://patents.google.com/patent/US20040051812A1)