



**Charlie Hayes**

440-915-2158

[charlie@obive.net](mailto:charlie@obive.net)

**Multi-platform Software Engineer and UX Designer with over 20 years experience**

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**Technical Summary**

- Java, C#, JavaScript, PHP, SQL, Python, Scala, Swift, VB.NET, VB/VBScript
- XML, HTML5, CSS3, SCSS, React, Redux, jQuery, AJAX, ASP.NET MVC, Razor, Django, Jinja, WinForms, Swing, WPF
- Nginx, Caddy, Apache, IIS, MS SQL Server, MySQL, Postgres, Redis, Git, Microsoft TFS, Subversion
- AWS, Azure, GCP
- JetBrains IntelliJ IDEA et al, MS Visual Studio, Microsoft Office, Adobe and Corel graphics Suites
- JProfiler, Visual Studio profiler, Wireshark, numerous other diagnostic tools, unit testing, coverage tools, continuous integration
- Usability and UX including prototyping, wire-framing, design, implementation, user testing, and analysis
- HTTP, TCP/UDP, WebSockets, DNS, TLS, encryption, certificates, graphic design of websites, applications, icons, and print
- Agile, SCRUM, GitFlow, code reviews, task-breakdown and prioritization, refactoring

**Experience**

**Architect, Software Engineer, TurboKiva, Personal project** **Nov 2013 - Current**

- PHP, Java, multi-tenant Postgres based web application for scheduling participants for activities based on their preferences
- Hosted on Google Compute Engine with Docker containers via TeamCity build and continuous delivery
- Java WebSocket Document upload and scanning service for participant import and preference upload
- Computer-vision backed table detection service with scantron-like bubble scanning for quick preference upload
- Highly-polished Excel and CSV document import tool with automatic column selection and realtime regex feedback
- Credit card processing through PayPal's Braintree API
- Custom, speed-optimized deployment and migration process
- Prometheus and Grafana monitoring

**Sr Software Engineer, Microsoft** **July 2022 - September 2023**

- Java, Python, C#, Azure
- Built CI/CD pipeline including framework for QA team to facilitate multi-environment integration testing within pipeline
- Leveraged multiple Azure systems including Functions, IOT Hub, Event Hub, Form Recognizer, Cognitive Search, Storage to build solutions for customers
- Mentored junior engineers; explain troubleshooting techniques, guide professional development
- Built ReAct-based ChatGPT interface for C# utilizing 'tools' to incorporate up-to-date data

**Sr Software Engineer, The Marketing Store** **May 2018 - March 2022**

- Java, RxJava, Vertx, SQL, Spring Boot, JS, CSS, React, PHP, Laravel, AWS (Lambda, S3, DynamoDB), Gradle
- Delivered numerous promotional web applications that securely and reliably handle tens of millions of requests per hour
- Led implementation of robust and efficient weighted sweepstakes/lottery drawing system, automatic notification, alternate selection, and corresponding monitoring tools
- Led front-end implementation of Avengers promotion for McDonalds
- Led numerous architectural and testing improvement efforts toward developer efficiency, agility, and CD/CI reliability
- Led transaction audit system handling multiple types of events, currencies, and one-to-many transactions
- Worked with multiple vendors to integrate, debug, and diagnose web view, webapp, Android, and iOS integration
- Presented on usability, frontend artifact compression/optimization, and IntelliJ IDEA IDE features
- Implemented authentication mechanism for internal systems leveraging HTTP Signature verification and Okta

**Technical Lead, Critical Mass** **May 2017 - November 2017**

Project: [Legal Services website](#) May 2017 - November 2017

- Led delivery of two websites leading to successful sale of company
- Coordinated development and project handoff between teams in India, Costa Rica, New York, and Chicago
- Provided technical leadership, direction, and mentored developers
- Established workflows, broke tasks into manageable workloads and assigned to appropriate developers based on skill
- Managed technical relationships with client, including the development and consumption of numerous APIs
- Organized and documented internal development practices, APIs, and team workflow in Confluence
- Early identification and solutioning of numerous technical challenges before they blocked the team
- Planned and implemented release process, application migration, and account migration

**Senior full-stack software engineer, Wargaming.net Chicago Baltimore** **Nov 2014 - March 2017**

Project: [World of Tanks Console Portal Team](#) Dec 2014 - March 2017

- Full-stack developer on public-facing, responsive, localized portal for top-performing free-to-play cross-platform console game
- HTML5, SASS/CSS, JS, JQuery, MySQL, Python, Django, Jinja

- Designed and implemented robust, dynamic, data-driven image size validation system for in-house CMS
- Designed and implemented robust, fault-tolerant XML import system with object-oriented conflict resolution
- Designed and implemented end-to-end identity flow and true logout support to central OAuth system
- Designed UX for player registration system, implemented front-end and back-end components, integrated with OAuth
- Prototyped, designed, and implemented front-end and back-end aspects of RESTful clan management system
- Established, designed, implemented, and documented system of reusable front-end components and APIs for rapid, efficient, and robust feature implementation across the team
- Prototyped, comped, designed, and implemented user statistics page; was extremely well received by players
- Designed and implemented REST-based leaderboard front-end and back-end, integrated with internal rating server
- Images on site are built largely on SVGs, using SVG injection, and CSS styling. Developed SVG sprite packager and integrated into SVG injection. Saved significant data transfer and HTTP requests while allowing flexible dev workflow.
- Designed and implemented robust carousel for front page; works across browsers, platforms, and on mobile

Project: TagBot release notification application Nov 2014 - 2015

- Designed, implemented, and tested release notification system
- HTML5, CSS, JS, SQLite, Python, Django
- Users can create templates for release notification drafts then send and track

Projects: Monitaur, Sauron build and system monitor applications 2014 - 2015

- Designed, implemented, and tested dynamic dashboard front-end for build monitor and telemetry for wall mount
- HTML5, CSS, JS, SQLite, Python, Django
- Designed system for automatic reloading upon deployment with zero user intervention
- Fault-tolerant; fully automated, constant update process powered by AJAX

### Consultant, MPS Partners

**March 2012 - Nov 2014**

Consulting company focusing on Microsoft technology stack; typically reporting to clients' site

Client: Ogilvy One; Tech Lead, Solution developer Mar 2013 - Jul 2013, Oct 2013 - Nov 2014

- Design and implementation of multiple web applications. ASP.NET MVC, SQL Server, PHP, HTML5, JS, jQuery, AJAX, CSS
- Integration with vendor systems including Facebook and YouTube
- Multilingual design accommodating international branding and translations
- Integrated client side and server side image cropping mechanism
- Designed and implemented multiple highly-polished dynamic, responsive, and performant widgets/applets
- Accommodated numerous last-minute visual and technical hurdles and changes
- Acted as team lead; coordinated with many brand, vendor, and internal teams

Client: YoungTouchstone; Solution developer Jul 2012 - Dec 2012

- Design, implementation and testing of new industrial parts quotation web application using ASP.NET MVC, Razor
- Created master pages and stylesheets for use by application
- Created MS Access to EF porting tool which created models and initialization in C# code from a given database
- Ported legacy VB6 business logic to C# backend service

Client: LaSalle Solutions; Solution developer Mar 2012 - Jul 2012

- Responsible for design, implementation, and testing of new features for networking equipment inventory and support contract management web application written in C#, ASP.NET MVC4 Razor, CSS, JavaScript, jQuery, AJAX, and JSON; backed by Entity Framework and SQLServer 2008.
- Integrated OAuth based LinkedIn connectivity
- Created custom dynamically filterable report and accompanying graph. Backed by HighCharts and Telerik Grid
- Integrated Jabber/Cisco Jabberwerx based instant messaging client into application
- Created custom instant messaging system and integrated into application
- Analyzed and reported otherwise undocumented security restrictions and implications of ASP.NET MVC web app

**(prior experience truncated for length)**

### Education and Certification

<b>Master of Science in Human Computer Interaction</b> DePaul University	<b>2022</b>
<b>Bachelor of Arts in Computing</b> DePaul University	<b>2016</b>
<b>Microsoft Certified Solutions Developer: Web Applications</b> (expired)	<b>2013</b>
<b>Microsoft Specialist: Programming in C#</b> (expired)	<b>2013</b>
<b>Microsoft Specialist: Programming in HTML5 with JS and CSS3</b> (expired)	<b>2012</b>

### Volunteering

**Director**, Camp Fitch Computer Camp (two weeks every summer) **June 2000 - Current**

- Taught Java, Python, JavaScript, C++, C#, Unity, Flash, VB, and Applications to campers between the age of 9 and 17
- Led network configuration/infrastructure and camper instruction/projects

- Planning, curriculum, and administration
- Created, setup, customized, and maintained internal wiki
- Designed, coded, and tested website; uses responsive design for mobile support; PHP, CSS, JS