hg

Hector Gray

Engineer + **Architect** + **Hacker**
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Who am I?

I started programming basic while growing up in elementary school in Japan as way of learning typing. By middle school I was learning C++ and by 10th grade I was releasing Windows 95 applications written in C++ to download.com. MediaXL was a customizable mp3 and video player that allowed me to win a 1st place scholarship in the 1999 Hi-Tech Quest competition, which then led to my first job as a C++ developer in high school.

Today I am a constant innovator, leader, learner and teacher. I consider myself a disciplined engineer, a team player with a true passion for creating scalable & maintainable software. I have a tendency to live on the bleeding edge as well, trying to always learn more about new frameworks, languages and technologies.

Skills

C# LIVE STREAMING AAC AWS
HTTP RIAK Javascript C# MATERIAL DESIGN
SQL ES6 GOOGLE CLOUD WCF LINUX HLS
NOSQL NODE POLYMER GRUNT CDNs
REACT.JS HTML SCRUM REST HTML5
WEB SERVICES FFMPEG H.264/H.265 TRAVIS CI

Accomplishments

Los Angeles Comcast NBCU Hackathon   11/2014

Challenge Winner – Today many people are not able to enjoy non-English content on television. In order to remove language as the barrier I built a Node & Polymer mobile application that can recognize what episode a user is watching and where they are in that episode. As the story progresses the app is updated in English with character details and plot twists as they happen on screen.

Hacking Healthcare: Creative Solutions to Medi-Cal's Problems   11/2014

1st Place **–** I created a Node & Polymer HTML5 application that test a patients Medi-Cal readiness, afterwards they are presented with either a printed Medi-Cal application form in their preferred language or a list of the next steps required to become eligible. The primary goal is to dramatically reduce the number of unnecessary applications in the backlog, which are currently over 350,000.

ASA Certified Sailor – 101, 103, 104, 105, 106, 114

Microsoft CERTIFIED Professional Developer

Web Developer
Windows Developer
Enterprise Applications Developer

Experience   **Principal Architect @ Vixlet**   1/2015-12/2016

Vixlet is a passion based social network, which powers the Slipknot, My ATP and MLB Fans mobile and web applications, serving hundreds of thousands of passionate fans.

I built a JavaScript framework for quickly creating micro-services, this allowed for rapid development of new features and functionality and increased code consistency and maintainability. I led the API team during the migration from the original monolithic API towards a micro-service architecture and a successful launch of the new API.

I developed a cached relational graph for aggregating counts and storing and querying relations between objects such as users and media. This quickly provided functionality for future products such as Likes and Subscriptions.

I created an optimized system for handling static and personalized user activity feeds that allowed for faster propagation and delivery of data to users using RIAK, REDIS and SQS.

Principal Media Architect @ MySpace   8/2006-11/2014

Starting as a developer I was promoted through the roles of Team Lead, Development Manager, Director and then Principal Media Architect. I have held the title of SCRUM master and have led the Myspace production of many successful high quality live concert streams for millions of fans. While still developing hands on, I hired and provided clear direction and guidance to the members of the Media Processing, Ingestion and Copyright teams, totaling up to 16 people.

I created a media processing workflow engine first in .NET using WCF and Windows Workflow, then rebuilt in Node. Powered by our in-house direct show encoder or FFMPEG this service handled hundreds of thousands of daily transcodes from users and partners. It included the ability detect copyrighted material in user uploads and enforce any necessary DMCA rules, protecting Myspace from litigation.

To decrease the media processing time I built a broker system to balance uploads to the media processors. This helped upload servers to stream media to the most available media processor server. It greatly optimized the process and ensured users the least amount of wait time as possible. The broker was designed to be elastic and ensure a major partners 300Gb delivery would be processed without interfering with other partners or any other users. Other available servers would also be able to assist with the delivery.

I built a live transcoding engine that transcoded high quality audio and video into the requested format in real time via a CDN. It delivered all varieties of HTML5 video and audio including encrypted HLS. Over time this saved millions in bandwidth costs, allowed for faster downloads, increased user engagement and gave the user the best experience possible. As of writing this, it still serves the video background for https://myspace.com/justintimberlake.

When partners needed to deliver content in an automated means I developed a media ingestion engine that synchronized the rights, media and metadata from major music labels and picture studios. This engine used RIAK to store ingestion data and index file metadata and locations. It allowed Myspace to quickly onboard new partners, and trust the content would consistently be ingested into the primary Myspace SQL databases.

SDE @ Microsoft   6/2006-8/2006

I worked on the Microsoft Events ASP.NET website within the Microsoft Experience group. The website https://events.microsoft.com allows millions of users to navigate, book and explore thousands of Microsoft events around the world and online.

I stopped many software security exploits from being released before launch. I also worked with product owners as a member of the SCRUM team to guarantee the software met requirements and was released on time.

Software Developer @ Servco   3/2006-6/2006

As a developer for Hawaii's largest Toyota dealership I developed interfaces responsible for transitioning the Warranty platform from a mainframe application to a C# and ASP.NET solution. The performance this provided greatly decreased the time to process warranty repairs and the time waiting on parts and services.

Software Developer @ HMSA   8/2005-3/2006

I built a robust .NET ETL service to handle 276/277 EDI medical claim transactions. This required a high attention to detail in order to deliver certifiable software within very tight deadlines. My solution replaced a mainframe application, giving customers faster and more reliable claim processing.

Software Developer @ ICanHasCheezburger   2005-2006

As the first employee for the world's favorite LOL cat site I helped transform the famous blog into a true social media application by creating an online meme builder. This gave millions of readers the ability to create, caption, browse and share thousands of memes. After launching we saw 10x increase in unique visitors as the site became more viral and popularity spread.

Solutions Developer @ CTA [Security Clearance Obtained]   8/2001-8/2005

At CTA I worked as both a solutions engineer and a trainer, teaching many .NET, Java, SQL & database design & programming methodology classes.

I have provided training and created mission critical applications for the members of the Air Force, US NAVY. I built a Windows mobile application for the U.S. Department of Veteran Affairs, which provides online health services to Veterans. This was presented before Congress and approved.

Software Developer @ Inovaware   8/2001-8/2005

Inovaware is one of Hawaii's largest international award winning E-Commerce companies. Here I created native C++ user interfaces for the enterprise software configuration system. I also created C++ libraries for our clients for submitting billing data to our backend Java web services.

Software Developer @ Postcard Software   11/1999- 8/2001

I developed the application used to display post cards in MFC and C++. This software was targeted to a Japanese audience and became very popular with hundreds of thousands of customers.