

## INTRODUCTION

Chris is a software engineer with over 20 years of experience and a passion for interactive development. He excels at building modular components, web applications and data visualizations. Possessing a diverse skill set, he is able to fulfill the roles of tech lead, manager, individual contributor, and mentor. Chris enjoys a good challenge, and seeks opportunities that allow him to push limits, set trends, and break molds.

## EDUCATION

### CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA

*Bachelor of Science, Electrical and Computer Engineering, December 2007*

## SKILLS & PROFICIENCIES

- |                   |   |
|-------------------|---|
| • Technologies    | JavaScript, Typescript, SSR, sass, PostgreSQL, AWS Lambda, DynamoDB, indexedDB, C#, ES5, AS3      |
| • Frameworks/Libs | React, redux, Next.js, MUI, node, d3, GSAP, Highcharts, AG Grid, three.js, Vue, Dexie, pixi, jest |
| • Tools           | VSCode, copilot, git, webpack, Vite, Miro, Jira, Confluence, Figma, XD, Canva, Photoshop          |
| • Deliverables    | Websites, MicroFrontends, apps, presentations, convention panels, games, ads, banners             |

## PROFESSIONAL EXPERIENCE

### Metabolon, Research Triangle Park, NC

*Principal Software Development Engineer, 12/2021-Present; Senior Software Engineer, 08/2017-12/2021, Remote off-site*

- Build a React website to be the primary source of client deliverables
- Improve customer experience by replacing command-line processes with streamlined graphical user interfaces
- Develop tools to convert graphs authored in Cytoscape desktop to the web client format, Cytoscape.js
- Create data visualizations with d3 and Cytoscape.js. Utilize web workers and virtualization to process large data sets
- Develop internal web-based solutions to eliminate paper processes and provide quality of life upgrades for employees
- Create a shared component library to avoid code duplication across projects
- Work with product management to gather feature requirements, create and point stories, and prioritize work items
- Address security vulnerabilities, manage build pipelines and coordinate releases
- Create UML diagrams and documentation. Identify technical debt and produce optimization solutions
- Keep the ecosystem up to date. Adopt hooks, convert class components to functional, move from thunk to RTK query, etc
- Interview and onboard new team members. Distribute tasks, perform code reviews, provide feedback on patterns and style
- Leverage copilot to write unit tests, optimize code and to provide boilerplate
- Assist with backend AWS migration: Develop C# .NET authentication middleware to secure backend routes

### NeON, an FCB Health Company, New York, NY *Freelance Senior Developer, 11/2013-05/2017, Remote off-site*

- Develop responsive websites using various technologies such as Angular, React, Next.js, handlebars, pug
- Develop web and flash content for tablet-based CRM tools, games, banner advertisements and panels
- Develop NodeJS/Electron-based desktop servers for multi-screen, networked application rollouts
- Create data visualizations with d3. Tabulate data with AG Grid
- Attend conferences and events to provide on-site support and live updates when necessary
- Coach/Mentor team members on patterns, best practices and style
- Ensure that creative concepts stay within operable technical specs. Advise creative on user interface and experience

### Hidden Level Games LLC, New York, NY *Co-founder and Engineer, 10/2011-12/2017*

- Develop an interactive programming game (Beta) for Desktop Windows and Mac OS in AS3 and Adobe AIR
- Create a scripting language (CodePop) that allows users to modify world and object properties
- Develop a Python web server that allows users to save and share their creations
- Program engaging gameplay mechanics; grappling hook, collect items, projectiles
- Expand CodePop with conditional and loop statements and an event system
- Create a prototype web socket server for real-time multiplayer and collaboration
- Partner with the Anita Borg foundation and similar organizations to host Beta coding camps
- Work with educators to create classroom curricula and content

## **Harrison and Star, New York, NY** Freelance Senior Interactive Developer, 11/2011-12/2013, Remote off-site

- Develop HTML/CSS3/JavaScript content for iPad-based marketing tools
- Develop and optimize AIR applications targeting touchscreen desktop and iOS platforms
- Interface with hardware via bluetooth, usb, and serial port i/O streams
- Build a suite of applications that enable iPads to control video content across networked devices using web sockets
- Create particle effects and three dimensional experiences with WebGL
- Architect a SQLite database manager for tracking, storing and distributing application metrics
- Contribute technical expertise to the creative process, vetting ideas against specifications and timelines
- Develop HTML/JavaScript websites with backwards-compatibility all the way down to IE7

## **Tremor Video, New York, NY** Freelance Senior Developer, 08/2011-11/2011

- Develop and optimize video and rich media banner advertisements
- Guide and mentor junior developers on best practices and style

## **NeON, an FCB Health Company, New York, NY** Freelance Senior Developer, 06/2010-04/2011

- Architect a content development framework for direct sales solution platforms. Target web, DVD/CD, Exploria, and Skura
- Write and generate documentation with ASDoc
- Mentor and train developers on process, best practices and framework
- Distribute tasks to team members based on skill level. Interview and evaluate new candidates
- Develop and optimize banners, microsites and rich media apps for Pfizer, Boehringer-Ingelheim, and others
- Provide technical guidance to the creative team. Ensure that concepts stay within operable technical specs

## **Visual Alchemy, New York, NY** Freelance Front-End Developer, 04/2010-06/2010

- Build a variety of modular flash applications for web, desktop and DVD release
- Stream online video via Flash Media Server, and package offline apps with both Zinc and AIR
- Build HTML/CSS/JavaScript websites from Photoshop comps
- Assist creative team during brainstorming, pitch & design phases. Ensure that concepts stay within operable technical specs

## **FCB Health, New York, NY** Freelance Senior Developer, 02/2010-04/2010

- Build and animate interactive widgets and charts
- Mentor and train developers on process and framework
- Distribute tasks to team members. Interview and evaluate new candidates.

## **LLNS, New York, NY** Lead Developer, 08/2009-01/2010

- Architect a scalable content development framework for direct sales solution platforms
- Distribute tasks to team members based on skill level. Interview and evaluate new candidates
- Set the tone for development by introducing key Object-Oriented programming practices
- Work with design, account teams, and tech directors to keep projects on track and within spec

## **Erkel Associates, Crozet, VA** Independent Consultant, 02/2009-08/2009, Remote off-site

- Develop various interactive kiosk applications leveraging Actionscript 3 and Intuit touchscreen framework
- Allow several customization options via an XML-based content management system

## **IBM, Research Triangle Park, NC** Engineer/Scientist, 01/2008-03/2009

- Write Actionscript 3 test applications used to determine the stability of hardware components
- Identify, track, and solve defects blocking critical test cycles

## **IBM, Research Triangle Park, NC** Pre-Professional Co-op Engineer, May-August(annually 2004-2007)

- Completed four consecutive summer internships
- Develop practical test tools and applications using Flash and Actionscript 2/3
- Perform various tasks in the areas of schematic design, signal integrity, component testing, and networking