

## SUMMARY

Senior software architect, developer, and tech lead focused on solving domain-specific problems with artificial intelligence.

Extensive experience working remotely and leading global teams distributed across multiple time zones.

## CURRENT SKILLS

### Languages, Frameworks, and Platforms

JavaScript, Python, Solidity, React, Hardhat, ethers, Firebase, OpenAI, Vertex AI, Ollama, Huggingface

## SELECTED PROJECTS

<b>PlotRocket</b>	plotrocket.app
<b>Loop Dust</b>	loopdust.art
<b>Building on Ethereum</b>	amzn.to/3iDsG1q
<b>Boson Protocol</b>	bosonprotocol.io
<b>Avatars</b>	avatars.io
<b>Fismo</b>	fismo.xyz
<b>Nifty Cannon</b>	niftycannon.app
<b>Culturalyst</b>	culturalyst.com
<b>PureMVC</b>	puremvc.org
<b>CustomShow</b>	customshow.com
<b>ISPAN</b>	lmt.co/2LwQ80n
<b>WeightWatchers</b>	youtu.be/AqfXZDvdb3r4

## PUBLICATIONS

### Technical Books

*Actionscript Developers Guide to PureMVC*  
*Building on Ethereum with Solidity and React*

## RECOMMENDATIONS

"Cliff stepped into an ongoing, \$7 million effort with over 1500 pages of specifications and requirements and began contributing on day one. He took over development of what had been identified as the program's biggest barrier to on-time delivery, the user interface, and transformed it into a polished, ahead-of-schedule component that our end users were ecstatic for. Customers with a wide base of experience with diverse Common Data Link terminals have said that Cliff's user interface is the best looking, most intuitive interface they have ever used on such a device. I could not recommend Cliff Hall and Futurescale more highly than I do. Futurescale will absolutely deliver superlative results in a timely manner."  
- Brian Connell, Project Lead, **Avtec Systems**

"Cliff is one of the most thorough and detail-oriented developers I've had the pleasure of working with. He asks all the right questions upfront and then just delivers the right product at the right time without requiring any further guidance or oversight. He manages his time really well, doesn't shy away from learning new technologies, and does the work with honesty and diligence. I would recommend Cliff to anyone who wants to build a solid product and has no time for micro management."  
- Aman Thind, Executive Director, *Electronic Trading & Real-time Analytics*, **Morgan Stanley**

"Cliff is an eclectic, high-energy guy whose off-the-wall thinking can turn an insoluble problem into a cakewalk. We worked on a variety of projects together, every one a pleasure. He's a real trouper who gets the job done."  
- Jos'h Fuller, Animator / Developer, **ZFx, Inc**

## EXPERIENCE

### Futurescale, Inc

CEO, Principal Consultant

2004-Present

### PLOTROCKET

AI Research and Development

Combined AI with a standard industry practice for creating episodic fiction, yielding a tool capable of planning multiple seasons of a television series down to the scene and beat.

Private Endeavor ~ Jan 2023-Present

React, Firebase, GPT-4, Gemini

### Redeemum UK Limited

Consultant, Architect, Tech Lead

Led a small, laser-focused team in delivering a completely new modular and audited Boson Protocol V2 architecture for self-serve, decentralized commerce at scale.

Taunton, UK ~ Sept 2021-Dec 2022

Solidity, Hardhat, Node.js, Mocha

### Seen.Haus

Consultant, Architect, Tech Lead

Built fully upgradeable, open-source NFT marketplace contract suite including primary and secondary markets with a focus on phigital sales.

New York NY ~ May 2021-Aug 2021

Solidity, Hardhat, Node.js, Mocha

### KnownOrigin Labs

Consultant, Developer

After several spikes to find the most gas efficient proxy architecture, built artist collaboration and royalty splitting smart contracts. Expanded unit test suites.

Cheshire, UK ~ Feb 2021-Mar 2021

Solidity, Hardhat, Node.js, Mocha

### Dapp Wizards, LLC DBA nft42

Consultant, Architect, Tech Lead

Built *Avatars*, the first NFT project to put all art and metadata on-chain. Over 1M USD volume in the first 6 months of operation. Devised unique minting and play-to-earn mechanics.

Boise, ID ~ July 2019-Oct 2020

Solidity, React, Firebase, Node.js

### Culturalyst

Partner, Architect, Tech Lead

Created the infrastructure for a web-based professional network connecting artists with grant and performance opportunities. Using AI to seek, classify, and import opportunities.

New Orleans, LA ~ Mar 2017-Present

Angular 1.x, Angular Material, Firebase, Node.js, GPT-4

### Morgan Stanley

Consultant, Developer, Core Team Lead

Flex to HTML5 migration of Matrix, a modular financial trading and analysis application.

New York, NY ~ May 2013-Nov 2015

ActionScript, Flex, Javascript, Angular 1.x

### More Satisfied Clients and Agencies

*Adobe Systems, Assurant, Avtec Systems, Effective UI, Cisco Systems, Dorado, Google, JITC, The Jockey Club, J. P. Morgan Chase, Harley Davidson, Heretic Ventures, IndeeLabs, Lala Labs, Lockheed Martin, ManyOne Networks, NYK Logistics, State Street Bank, Reputation.com, Ropeadope Records, Sales Graphics, Universal Mind, US Strategic Command, Verizon Wireless, Weight Watchers International*

2004-Present

### Register.com, Inc

Senior Developer, Tech Team Lead

New York, NY ~ 2001-2004  
Java, J2EE, EJB, Perl, JBoss, Tomcat, Red Hat Linux

### About.com

Application Developer

New York, NY ~ 1999-2001  
Perl, Oracle, MySQL, SQL Server, BSD UNIX

### Prodigy Communications

Developer, Y2K Test Team Lead

White Plains, NY ~ 1998-1999  
C++, Mercury WinRunner, LoadRunner

### Cimtek Medical Company

CTO, Software Architect

Johnson City, TN ~ 1997-1998  
Visual Basic, Quark, IIS, NT Server

### Zfx / Zeta Image

Animator, Developer, Webmaster

Kingsport, TN ~ 1994-1997  
Perl, Prisms, Houdini, SGI IRIX, Novell UnixWare

### Bridge Computer Systems

Programmer, Analyst

Gray, TN ~ 1989-1994  
Oracle, RISC OS, SCO UNIX, UniBASIC

### Professional Data Services

Developer, Technical Writer

Johnson City, TN ~ 1988-1989  
Datapoint DataBUS

### Data Management Group

Co-Founder, Programmer, Analyst

Johnson City, TN ~ 1985-1987  
80x86 Assembly, QuickBASIC, DOS

### Data Equipment Supply

Game Programmer

Downey, CA ~ 1982-1984  
6502 Assembly, Commodore 64, Vic-20, PET