Walter S. Pollard Jr.

Senior Software Engineer
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SUMMARY

Senior Software Engineer with 25+ years building large-scale video streaming platforms, media players, and web applications. Thirteen years on Comcast's Xfinity Stream HD video platform as the Subject Matter Expert for desktop and Chromecast: HLS, MPEG-DASH, Google Cast CAF sender and receiver, DRM, ad insertion, QoE telemetry, closed captioning, and debugging tooling used across the org and by our partners. Now building production TypeScript and React through an AI-native Claude Code workflow.

SKILLS

Languages: TypeScript, JavaScript, HTML5, CSS3, ActionScript
Frameworks: React, Next.js, SvelteKit, Web Components, Lit, Google Polymer, Tailwind CSS, Video.js, Dash.js
Video and Streaming: HLS, MPEG-DASH, MSE, EME, CMAF, Google Cast CAF Sender and Receiver, multi-bitrate ABR, Widevine, PlayReady, DRM, Chromecast, QoE Telemetry, OTT, Live Streaming, Closed Captioning
Ad Tech: DAI, SSAI, CSAI, VAST 3/4, VMAP, FreeWheel, Google IMA SDK, DoubleClick DART
AI-Native Workflow: Claude Code, agentic sub-agent workflows, persistent agent memory, Model Context Protocol (MCP), reusable skills, GitHub Copilot, Google Gemini
Engineering: REST API Design, System Design, Code Review, Mentoring, Performance Optimization, Accessibility (WCAG, Section 508), Testing (Jest), CI/CD, Root Cause Analysis
Tooling: Git, GitHub Actions, Webpack, ESLint, Docker, Akamai CDN, Developer Tooling, Playback Diagnostics

EXPERIENCE

AI Native Software Engineer

Sierra Star Studio, Philadelphia, PA
Jun 2025 - Present

- Independent AI-native full-stack and video engineering: production TypeScript and React built through an agentic Claude Code workflow, with agent memory that persists across sessions and machines.
- Built PRISM, a multi-protocol live stream player running publicly at prism.nooroticx.tv.
- Built a two-part Google Cast system end to end: a Next.js sender (walter.pollardjr.com) and a companion CAF receiver (receiver.pollardjr.com) over a typed Cast message protocol, with 146+ Jest tests and GitHub Actions CI/CD.
- Built RTLU Explorer, a live React data-visualization site backed by a Node knowledge-graph pipeline deployed through GitHub Actions.
- Built JobTrackr (SvelteKit and TypeScript job-search dashboard) and RipTheLeetBot (Electron and React interview-prep app).

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Comcast Technology Solutions, Philadelphia, PA
Oct 2017 - Jun 2025

- Subject Matter Expert for Xfinity Stream HD video player across desktop and Chromecast, serving millions of concurrent viewers. Converted from consultant to full-time in the same department, on the same

development team.

- Led Chromecast from MVP to production, working directly with the Google Cast Application Framework (CAF) team, and built both the sender and custom receiver.
- Developed HD video playback with HLS, DASH, MSE, and EME in JavaScript on Polymer and Lit Element web components, with unit tests and the hooks into the Stream player; handled cast-session parity, audio and subtitle selection, scrubbing, and playback error handling.
- Reviewed the VIPER player core's TypeScript nearly every day, managed the roadmap for integrating Xfinity Stream with VIPER, and pushed occasional PRs to it.
- Built the closed caption engine used in the original Flash player and carried captioning forward across every player generation since.
- Built fallback strategies for real-world network conditions and absorbed platform-level changes such as browser autoplay policy restrictions across the device matrix.
- Implemented DAI, SSAI, and CSAI advertising (FreeWheel, Google IMA SDK) and DRM delivery (Widevine, PlayReady, Adobe Primetime PSDK).
- Built playback diagnostics, QoE telemetry, and debugging tooling adopted across QA, engineering, management and partner teams to root-cause P1 playback incidents.
- Held technical direction and enabled multipartner support across five cable partners, Comcast included.

Senior Software Consultant
SunGard / FIS, Philadelphia, PA
Feb 2012 - Oct 2017

- Embedded consultant on the Xfinity video player team at Comcast Interactive Media. SunGard was acquired by FIS during the engagement; when FIS wound down the department in 2017, the role converted to full-time Comcast in the same department with the same development team.
- **Originated the Xfinity Stream web player.** Took over a broken single-purpose Flash project that only supported embedded play/pause and evolved it into the streaming player that moved Comcast from third-party embedded video to owned, full TV streaming on the web. Its growth is what justified standing up a dedicated core-player team; the core was migrated to VIPER.
- Front-end video player development across desktop and connected devices: ActionScript and JavaScript, adaptive streaming, DRM, and advertising integration.

Senior Flash Developer
Constellation.tv, New York, NY
Aug 2011 - Dec 2011

- Built a live HD video and web-camera group-watching player (OSMF plus Akamai plugins); Akamai RTMP, HDN1, HDN2, and SecureHD beta program developer.

Senior Flash Developer
Empathy Lab, Conshohocken, PA
Sep 2010 - Jul 2011

- Rogers OnDemand OVP video framework with Akamai HDCore CDN integration; UltraViolet (UVVU) interactive modules and video player; Android 2.2+ targeted video player; Sprout Online AS3 development.

Senior Flash Developer
Razorfish Health, Philadelphia, PA
Dec 2009 - Aug 2010

- AS3 development with server-side data-feed integrations for enterprise healthcare clients.

Senior Flash Developer
Comcast Entertainment Group, Los Angeles, CA
Oct 2008 - Jul 2009

- Built video experiences for E! (eonline.com) and FEARnet: the eonline.com video gallery and Brightcove-based video players across E!, directing development remotely from Philadelphia following the FEARnet migration.

Senior Flash Developer and Technology Leader
FEARnet, Comcast, Philadelphia, PA
Mar 2007 - Oct 2008

- Owned all internal Flash projects at fearnet.com, including the FEARnet video player.
- Brightcove AS3 video, Omniture AS3 tracking, and DoubleClick DART AS3 advertising support; reviewed, deployed and supported third-party vendors.
- Provided resource management for three part-time employees when the technology team was reduced to one; supported the site migration to Comcast Entertainment Group.

Flash Developer and Tech Lead
Refinery Inc., Hatboro, PA
Jan 2006 - Mar 2007

- Led development across advertising-agency accounts including Campbell Soup Company, Merck Pharmaceuticals and Merrill Lynch: interactive learning modules, educational games, dynamic surveys and Pointroll banner campaigns.
- Built custom video players and video podcast players; estimated time, wrote SOWs and managed resources.

Flash Developer
Vantage Technologies, Newtown, PA
Aug 2004 - Jan 2006

- Led Flash development on MyAccess (gomyaccess.com), building the MyAccess 6.0 student GUI: essay storage, server-side spellchecking and feedback, with an estimated 300,000+ hits to grammar utilities over two months.
- Won the Vantage Technologies Developer's Award twice, including most innovative development in a single product.

Contract Flash Developer
Vantage Technologies, Newtown, PA
Jun 2004 - Aug 2004

- Built the AS2 Flash environment simulating Microsoft Office used by the International Computer Driver's License (ICDL) for certification testing. Became lead developer for ICDL, mentoring additional contractors, and converted to full-time on performance.

Web Developer and System Test Engineer
Unisys Corporation, Malvern, PA
Sep 2000 - Dec 2002

- Designed and implemented two internal PHP/MySQL/Apache sites and administered the web server; conducted **Section 508 accessibility testing** and wrote test plans across numerous platforms.

Assistant Email Administrator
Philadelphia Water Department, Philadelphia, PA
Sep 1998 - Sep 1999

- Drexel University cooperative education placement in municipal government IT. Reviewed legacy COBOL and FORTRAN code and supported email systems administration.

CERTIFICATIONS

Microsoft Certified Systems Administrator (MCSA)
Microsoft Certified Professional (MCP)
Microsoft, certified 2004, MCP ID 3165219
Windows 2000 track, exams 70-210, 70-215, 70-216, 70-218

EDUCATION

Cittone Institute, Philadelphia, PA
Network Systems Professional Diploma, graduated 4.0 GPA
2002 - 2003

Drexel University, Philadelphia, PA
Electrical Engineering and Computer Science, coursework, no degree conferred
1997 - 2001