

Joe Held

AV Systems Engineer & Programmer
joe.held@gmail.com | heldsystems.net

PROFILE

AV Systems Engineer and Programmer with AVIXA CTS-I certification, active DoDTS/SCI clearance, and a US Coast Guard Master Captain's License. Proven track record designing, programming, and deploying mission-critical AV systems in secure government, corporate, and commercial environments. Expert in AV-over-IP, Crestron SIMPL/SIMPL#, AMX NetLinx, and signal routing across complex networked infrastructures.

Skilled in technical documentation and CAD-based AV system design (AutoCAD, Revit), with a strong foundation in enterprise IT systems, remote access, and VLAN/network configuration. Adept at bridging AV and IT disciplines to deliver robust, scalable, and future-ready control and infrastructure solutions. Trusted contributor to multidisciplinary teams with strong communication, documentation, and project execution skills.

PROFESSIONAL SKILLS

- ***AV System Design & Integration***
- ***Control System Programming***
- ***Enterprise IT Administration***
- ***CAD Drafting & 3D Modeling***
- ***Technical Leadership & Training***
- ***Maritime Operations Leadership***

CERTIFICATIONS

AVIXA - CTS-I, CTS

Dante - Level 1, 2, 3

CompTIA - A+, Network+, Security+

QSC - Q-SYS Level 1, 2

Extron - Control Specialist, AV Associate

Biamp - Tesira

Crestron - DMC-E-4K, DMC-D-4K, IVC-E
(Intelligent Video Engineer), DCT-C, TCT-C,
Flex, P301

US Coast Guard - Captain's License, 100 Ton
Master

AMX - Programmer, Technician (Enova)

OSHA 30

EMPLOYMENT HISTORY

AV Programmer - *Vision Technologies*, Baltimore, MD

March 2024 — Present

- Developed and implemented robust AV control systems using Crestron SIMPL, SIMPL#, and AMX Netlinx, integrating advanced touch panel interfaces that align with client branding and usability standards.
- Collaborated with project managers, engineering teams, and stakeholders to design and deploy classified and open AV solutions for high-profile clients including the US DHS, FDA, FCC, DoD, and USSS.
- Diagnosed and optimized AV-over-IP networks, control systems, and software integrations to meet mission-critical performance and security requirements.
- Created and maintained system documentation, including source code, graphical user interface submittals, and end-user guides, while contributing to code standardization, GUI enhancements, and workflow improvements.

AV Systems Engineer - *Defense Information Systems Agency (DISA)*, Ft. Meade, MD

December 2022 - March 2024

- Spearheaded the design and implementation of next-gen conference and presentation systems across the Agency, integrating state-of-the-art AV systems and IP video streaming technology built on the Crestron NVX AV over IP platform.
- Served as Subject Matter Expert for the operation and configuration of AV control and switching equipment throughout DISA facilities.
- Developed and maintained design documentation including technical system drawings, specifications, configuration data, and UI/control program code for all existing and newly designed AV systems.
- Created and updated control program code as well as touch panel UI designs for AMX and Crestron systems using NetLinx Studio, SIMPL, and VTPro.

Audio Visual Project Engineer - *Visual Sound Inc*, Baltimore, MD

March 2022 - January 2023

- Designed and commissioned a wide variety of AV presentation and communication systems for various corporate, higher education, and government clients.
- Evaluated system designs and bills of materials to ensure functionality per project scope of work.
- Oversaw project execution from presales through commissioning and client hand off.

AV Project Manager - *Design & Integration*, Baltimore, MD

September 2019 — March 2022

- Management of full project life-cycle for development and installation of commercial audio-visual communication and presentation systems including initial concept development, system design, procurement, change management, installation and build out, commissioning, and project close out phases.
- Responsible for project contract values ranging from \$30k to \$5M for a wide variety of commercial, higher-education, government, and military clients.
- Developed comprehensive training and development curriculum to guide inexperienced installation technicians through multi-year career path to achieve comprehensive set of industry-recognized certifications and skill set.

Audio Visual Engineer - *University of Baltimore*, Baltimore, MD

December 2017 - September 2019

- Produced live and studio-recorded audio-visual content with internal and external university clients.
- Operated digital audio and video recording equipment including audio/video switchers, networked control surfaces, live sound reinforcement, and VoIP/VTC communications hardware.
- Designed, installed, upgraded, and maintained multiple audio-visual system buildouts for use in conference, classroom, performance, and event spaces throughout the university campus.

IT Systems Administrator - *Ayers Saint Gross*, Baltimore, MD

April 2014 — September 2017

- Built, maintained, and deployed workstation and server images using Microsoft SCCM using custom build-specific driver packs allowing for full system builds in record time.
- Invoked multiple redundant data backup solutions to safeguard against crypto and ransomware attacks reducing system recovery time from days to minutes.
- Led the organization's first enterprise cloud migration by successfully transitioning on-premises Exchange Server infrastructure to Microsoft 365, establishing the foundation for full adoption of cloud-hosted services.
- Served as SME for the full Autodesk design software library, configuring and deploying CAD applications tailored to specific project requirements.

EDUCATION

University of Maryland, College Park, MD | August 2019 — Present

Bachelor of Science, *Computer Science*

Community College of Baltimore County, Catonsville, MD | August 2010 — June 2013

AAS, *CADD for Architecture and Engineering*

PROJECT SHOWCASE

Tri-class Secure VTC SCIFs (Various Sites)

Client: *United States Department of Homeland Security*

Role: *AMX / Crestron Programmer*

Scale: *Large (\$1M - \$5M)*

Campus NVX Upgrade

Client: *US Defense Information Systems Agency (DISA)*

Role: *Design Engineer*

Scale: *Enterprise (\$5M+)*

Altmeyer Building, Full AV Buildout

Client: *United States Social Security Administration*

Role: *Project Engineer / Project Manager*

Scale: *Enterprise (\$5M+)*

Recording Studios and Suite

Client: *Baltimore School for the Arts*

Role: *Design Engineer / Programmer*

Scale: *Small (\$0 - \$500k)*

USMC Commandant Briefing Room, The Pentagon

Client: *United States Marine Corps*

Role: *Commissioning Engineer*

Scale: *Mid-Size (\$500k - \$1M)*