

Samuel Reed

Creative Engineer for Entertainment Technology

Lighting & Show Control Portfolio



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Shoreline Theater Academy

Resident Technical Director / Lighting Designer
2020 - Present

The Shoreline Theater Academy is a performing arts organization that produces everything from student showcases to fully staged advanced musicals. Since 2020, I have served as the resident Technical Director and Lighting Designer, contributing to dozens of productions. In this role, I oversee all technical aspects of each show, from collaborating with directors in the early design phase to sourcing, installing, and programming lighting and sound systems. My work combines creative design with hands-on implementation to bring performances to life. Below are a few standout projects from my time at the Academy:

Reference: Laura Attanasio, Owner - kidzkonnectionct@gmail.com

Clue - January 2025

Lighting Design and Lead Tech Direction

- Designed and programmed over 100 lighting cues for a dynamic intimate production
- Installed and configured a full lighting system using ETC Nomad, Gadget II, and Bitfocus Companion
- Managed all technical aspects of the show, including pre-visualization, fixture placement, and cue sequencing
- Collaborated closely with the director to create a stylized, moody lighting design that supported the farcical tone of the production



A screenshot of the ETC Nomad software interface. The top part shows a preview window with a grid of colored squares representing the stage. Below it is a cue list table with columns for Cue, Int Up, Int Down, Focus, Color, Beam, Dur, M, B, Fwd/Mg, Link, and Notes/FX. The table lists several cues, including 321, 323, 324..., 324.6, 324.7, 324.8, 324.9, 324...., 325, 327, and 328. The bottom part of the screen shows a timeline with various effects and controls.

Cue	Int Up	Int Down	Focus	Color	Beam	Dur	M	B	Fwd/Mg	Link	Notes/FX
321	1	1	1	1	1	1					
323	1	1	1	1	1	1					
324...	0.3			0.3		0.3					
324.6		1		1		1					
324.7	1	1	1	1	1	1					
324.8	0.3			0.3		0.3					
324.9	1			1		1					
324....	0.3			0.3		0.3					
325	1	1	1	1	1	1					
327	2.5			2.5		2.5					
328	0.3			0.3		0.3					

Clue – Production Photo & Cue Sheet

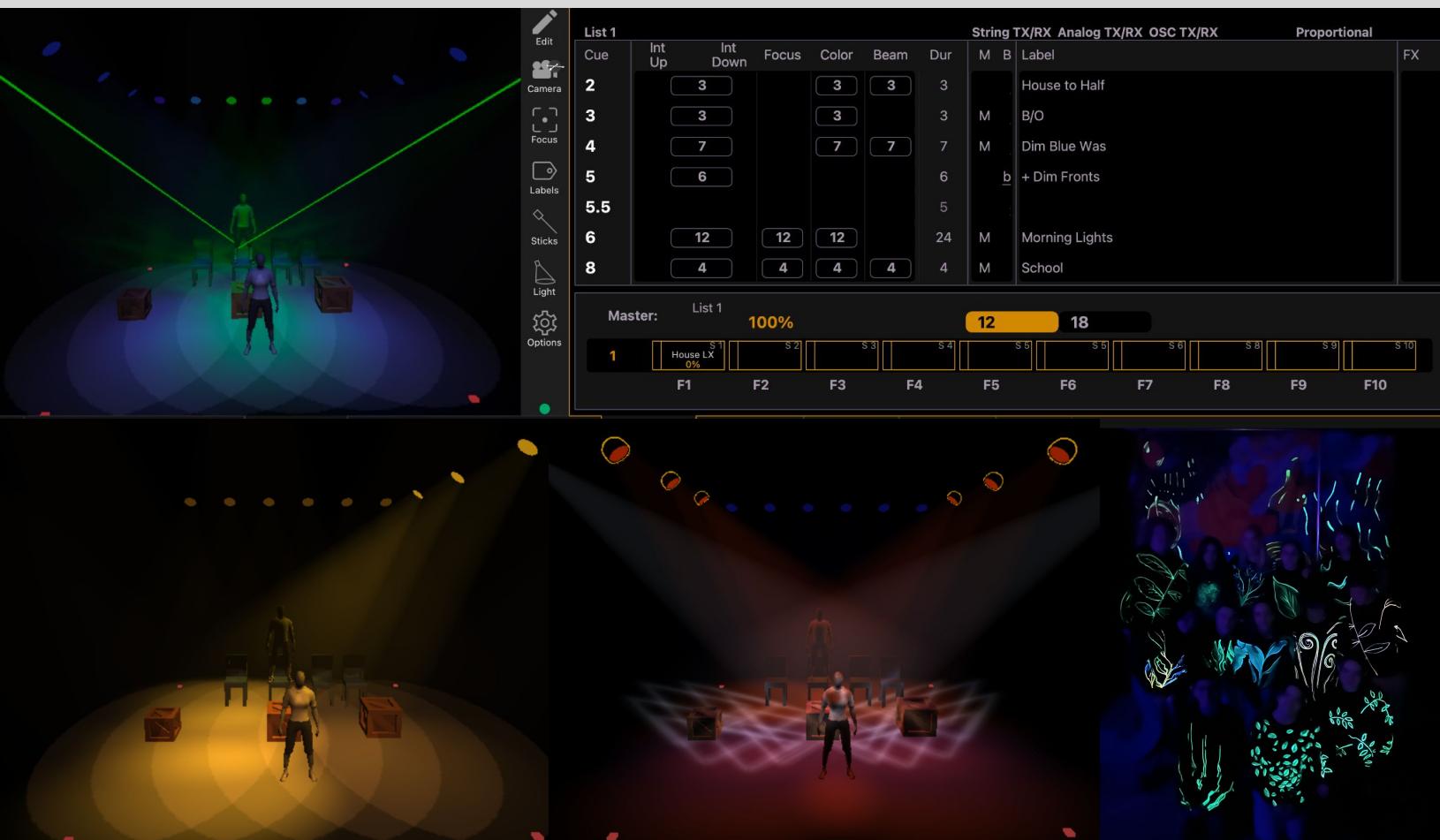
Final lighting look alongside a portion of the programmed cue list, created and executed on ETC Nomad for this stylized black-box production.

Escape the Noise

Premiering at the Edinburgh Festival Fringe 2025

Lighting Design and Lead Tech Direction

- Leading lighting design and cue programming for this original production debuting internationally
- Collaborating with directors to develop a full lighting plot and visual style using ETC Nomad, ETC Ion, and Augment3D
- Responsible for system design, previsualization, and show file prep ahead of overseas load-in



Scene	Page	Q	Description	Fade In (time)	Call Conditions (Line / Action)	Q	Created	Issues	Notes	Preset
0	0	1	House		- House Open	1	<input type="checkbox"/>	<input type="checkbox"/>	- House Lights Up	
0	0	2	House to Half	3	Doors closed	2	<input type="checkbox"/>	<input type="checkbox"/>	- House Lights to Half	
0	0	3	Blackout	3		3	<input type="checkbox"/>	<input type="checkbox"/>	B/O - People enter	
1	2	4	Dim Blue - stage wash (mostly back + side lit) (movement mig	5+	After "You up... really need to talk to you"	4	<input type="checkbox"/>	<input type="checkbox"/>		1
1	2	5	add blue Front Lights	5	Actors start singing (could be auto if necessary)	5	<input type="checkbox"/>	<input type="checkbox"/>	- Dim fronts to see some face	1 + front
		5.5	needs to get brighter when	3	*Put my phone down* chorus	5.5	<input type="checkbox"/>	<input type="checkbox"/>		
1	4	6	Morning Lights fade up	5	Alarm Clock Rings	6	<input type="checkbox"/>	<input type="checkbox"/>	- Not full brightness	2
2	7	8	School Lights	2	School Bell Rings	8	<input type="checkbox"/>	<input type="checkbox"/>	Full Brightness	3
2	18	10	Bus Lights (All line up SL and then move to back of stage)	4	"Last Looks"	10	<input type="checkbox"/>	<input type="checkbox"/>		4
		11	Without my phone lol song fun moving lights		SONG Starts		<input type="checkbox"/>	<input type="checkbox"/>		
3	19	12	Nature - Day	5	SM Call - Bus Transition to Woods	12	<input type="checkbox"/>	<input type="checkbox"/>	Nature daytime look	5
3	31	14	Blackout	5	*Sams Blowup*	14	<input type="checkbox"/>	<input type="checkbox"/>		
3	31	16	Blacklight Only	5	After ~5 second hold	16	<input type="checkbox"/>	<input type="checkbox"/>		6
3	31	18	Woods - Night	4	After ~6 second hold	18	<input type="checkbox"/>	<input type="checkbox"/>		7
33		20	Blackout	5	"Blue Eyes	20	<input type="checkbox"/>	<input type="checkbox"/>		
33		22	Blacklight Only	5	After ~5 second hold	22	<input type="checkbox"/>	<input type="checkbox"/>		6
33		24	Woods - Night	4	After ~6 second hold	24	<input type="checkbox"/>	<input type="checkbox"/>		7
38		26	Stars	5	"Thanks babe"	26	<input type="checkbox"/>	<input type="checkbox"/>		7 + Stars

Bye Bye Birdie - 2024

Technical Director and Lighting Designer

- Designed, rented, and installed the lighting system for a traditional proscenium space
- Programmed all cues using ETC Element, adapting to the larger venue's rigging and throw constraints



Rent

2023

Technical Director
and Lighting
Designer

- Created and executed a fully custom lighting design for an in-the-round configuration
- Programmed cues using QLC+ and ENTTEC Pro, optimizing flexibility for a non-traditional performance layout
- Built a custom wireless projection playback system using Raspberry Pi for reliable on-stage control of video elements



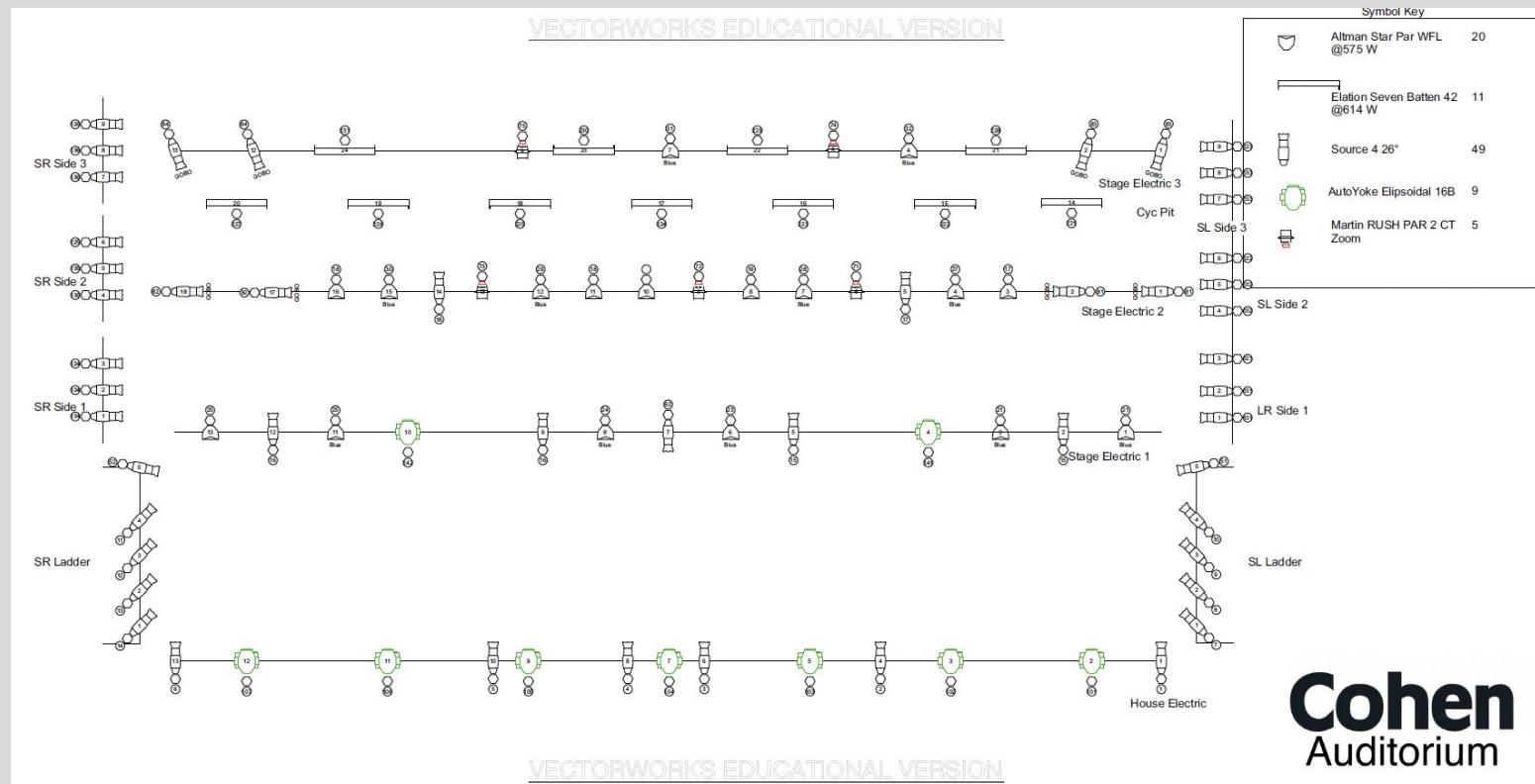
Tufts University - Cohen Auditorium

Lighting Technician & Systems Maintenance

2023 - 2025

Served as a student technician for Tufts' primary performance venue, Cohen Auditorium. Responsibilities included designing the semesterly lighting plot, maintaining and servicing all venue lighting equipment, and training students and guest users on the ETC Element console. Frequently collaborated with campus and external clients to program lighting for events, concerts, and theatrical performances.

Reference: Chris Young, Theater Manager - Christopher.Young@tufts.edu



Cohen
Auditorium

Cohen Plot 2024: This plot was part of a major update to Cohen Auditorium's lighting grid. I led a team of technicians in installing new fixtures, rehanging and refocusing the entire rig, and redoing the rep patch.



TEDxTufts at Cohen Auditorium

One of many events that utilized the updated lighting plot I created. I assisted with programming and event support.

Falsettos - 2023

Lighting Designer and Lighting Tech

- Designed and created the lighting plot for Torn Ticket II's production at Cohen Auditorium
- Collaborated closely with the director and production staff to develop the lighting concept
- Produced detailed pre-visualizations (included below)
- Programmed and executed over 150 lighting cues on ETC Element console



Previsualization Rendering

Early concept rendering created in collaboration with the director to establish mood and color

Scene	PAGE	Q	Description	Fade in (time)	Call Conditions (Line / Action)	Q	Created	Issues
		0.7					<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	9	1	Four Jews look - yellow and blues, front lit - spot trinna	2- 3	Start of song 1	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	10	3	Before red sea	1	When they run onstage	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	11	5	Red sea parts	1	"Then the Red Sea parted"	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	11	7	Blue lit with focus on action	2'	"Im Whizzer"	7	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	15	9	Spot on Marvin	0	BUTTON	9	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	15	11		0	"Well the situation's this"	11	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		12	focus couch SR		I swear we're gonna come through it		<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	16	13	Therapist office (some lights still on bedroom)	1	after final "I want it all"	13	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	17	15	Light up others on stage (spot trinna)	2	"Then Marvin came from work"	15	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	18	17	lights up on marvin when he starts to sing -- Red or purple foot		WHEN THEY MOVE TO CENTER	17	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		18			LOOOVEEE IS BLIND. -- DADDY IS A PRICK		<input checked="" type="checkbox"/>	<input type="checkbox"/>
					jason is done		<input checked="" type="checkbox"/>	<input type="checkbox"/>
	20				"will u be my valentine"		<input checked="" type="checkbox"/>	<input type="checkbox"/>

Cue Sheet Excerpt

A portion of the final cue sequence programmed for the production using ETC Element.



Production Photo

Final lighting design as implemented for live performance at Cohen Auditorium.

Reed Family Light Show

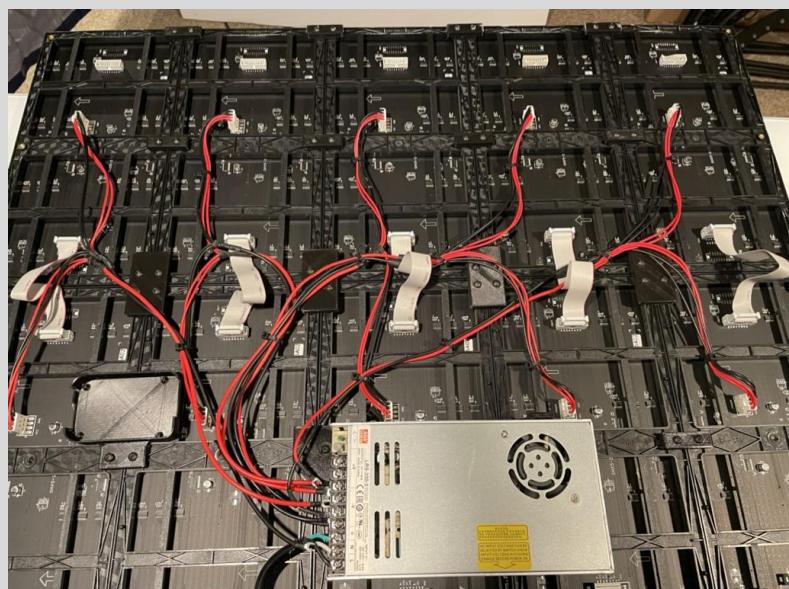
Personal Project
2014 - 2025



The Reed Family Light Show is a cherished Connecticut Shoreline tradition featuring over 10,000 programmable RGB pixels synchronized to music broadcast through our own radio station. The project includes fully custom-programmed songs and custom-built controllers communicating over a dedicated local network.

Show Control: Show control is managed by a network of Raspberry Pis and Beaglebone Blacks running the open-source Falcon Pi Player operating system. These controllers communicate via e.131 and Wi-Fi, synchronized by a main computer sending timing packets to multiple pixel controllers, P5 controllers, and the projection system.

Pixel Controllers: The pixel controllers, nine in total, were built by me over the years using Holiday Coro and Falcon controllers. The show's pixels use the WS2811 protocol and run on 12V power.



Projection: A new addition to the show, the projection is a used Laser projector (EPSON PL1500U) that I refurbished. It has a dedicated Raspberry Pi that feeds it video that I created custom for the show in Adobe After Effects.



Automation: The entire show runs on an automated nightly schedule, powering on and off automatically. Playlists adjust based on local traffic levels, and viewers can interact via a website to vote for the next song. Selected songs are sent automatically to the show network controllers for playback.

Reed Family Light Show Jukebox

Clinton CT
Tune to 94.1FM

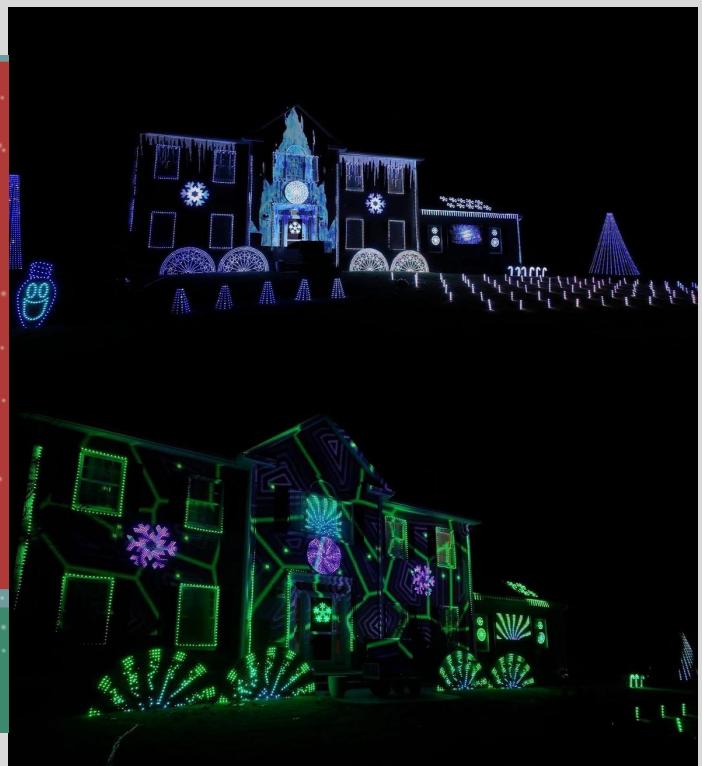
Playing Now:

Up Next:

- Wizards in Winter
- Grinch
- Candy Cane Lane
- Candy Cane Latte

Pick your Favorite

Select the song you'd like to hear from the list below. Your selection will be added to the list of songs that are already queued.
The list is limited to 5 songs and will be played in the order in which they were selected.

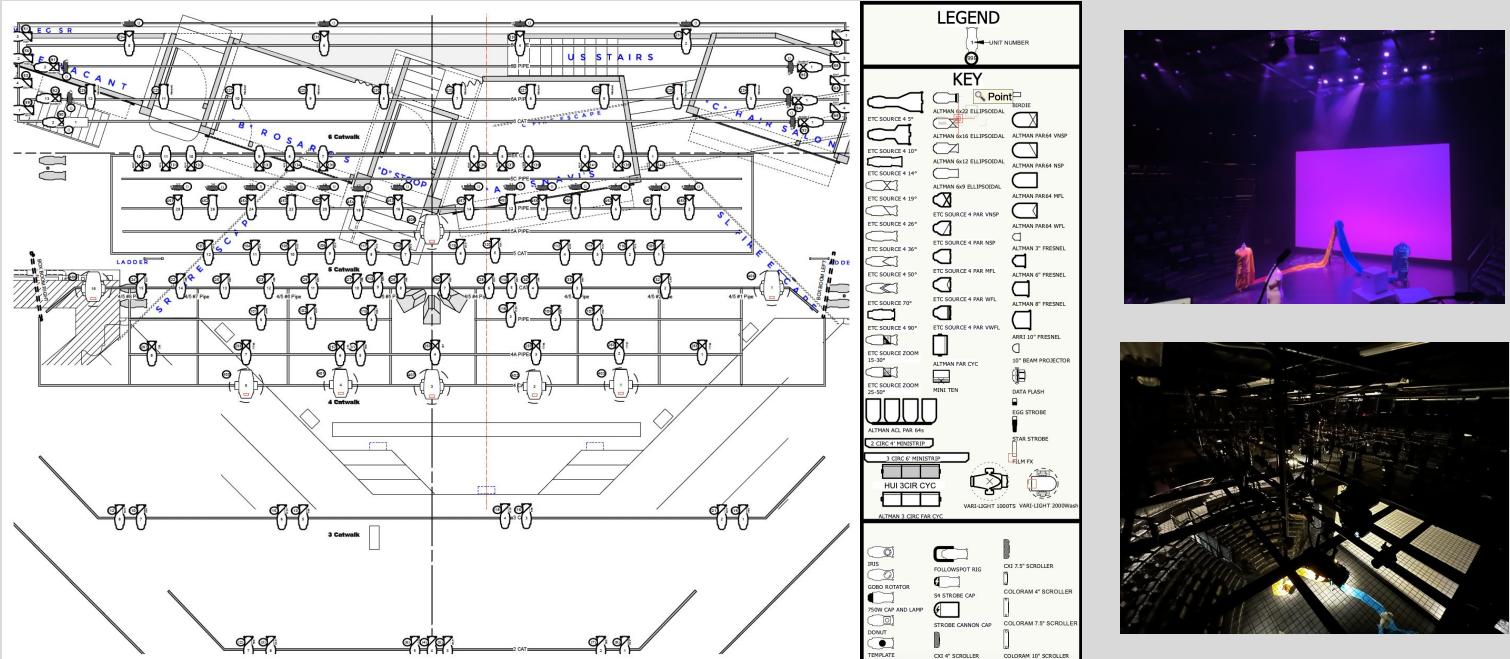


Education

BS Computer Science
Tufts University 2021 - 2025

TPS 172 - Advanced Lighting Design

Taught by professional lighting designer Brian Lilenthal, this course provided hands-on experience in theatrical lighting design. We used industry-standard tools like Vectorworks and Lightwright to create plots for real-world scenarios based on director notes and budget constraints. The class emphasized collaboration, script analysis, and creative problem-solving. The semester culminated in a showcase where we designed, hung, and programmed a full lighting sequence to music using a limited equipment list.



TPS 93 - Special Topics: Automated Lighting Design

This advanced course focused on the design, selection, and programming of intelligent lighting fixtures, specifically moving heads. Taught by Brian Lilenthal, it covered how to analyze spec sheets, integrate automated fixtures into lighting plots, and rig them safely. A significant portion of the class was dedicated to programming techniques on the ETC EOS system, including focus palettes, tracking, timing, and blocking. Emphasis was placed on using automated lights effectively and creatively to support storytelling on stage.



Tools & Technical Skills

Lighting Consoles: ETC (Ion, Element, Gadget)

Protocols: DMX512-A, Art-Net, OSC, E.131, WS2811

Software: ETCNomad (with Augment3D), Vectorworks, Lightwright, XLights, QLab, QLC+

Programming: Show Control Logic, Scripting (Raspberry Pi), Web-based Control Software (HTML, CSS, JS)

Systems: Cue Integration, Networking (Unicast/Multicast, IP Config), Timecode Sync, Dimming Racks, Projection Mapping