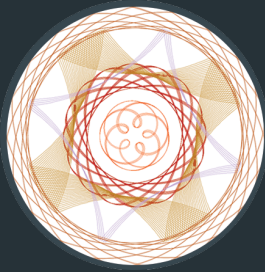# MATT LATHROP
Creative Technologist

Image From My First Major Coding Project

ABOUT ME

It is my passion to introduce technological innovations to people that help them thrive. My knowledge of computer science, technology, and various art forms enables me to bridge the gap between technology, business and design to bring solutions to problems that others may have thought were impossible.

CONTACT

matt@lathrop.org

(713) 499-0426

www.mattl.info

SKILLS

Product Management

Cross-Functional Communication

C Programming

C++ Programming

Image Processing & OpenCV

Computer Graphics

Embedded Development

Python Programming

QML & QT

TOOL PROFICIENCIES

- Git
- JIRA
- Asana
- MS Office
- Adobe CC
- Unity
- MATLAB
- Docker
- Arduino
- CAD
- OpenGL

RELEVANT EXPERIENCE

BELL FLIGHT
Tech Lead   **2020 - Present**

I work in the innovation group as a tech lead and scrum master to identify disruptive technologies and guide the team to build P.O.Cs to demonstrate the value of the technology
- Explore applications of IoT, cloud resources, AR/VR, AI, and embedded systems
- Requires me to rapidly learn new technologies, understand both internal and external customer needs and apply the technologies to address their needs.
- Past projects include: A.I. based component layout, VR flight simulator, scalable fleet management platform, radar data capture system, Azure cloud based flight log processor

TACTUAL LABS
Software Engineer   **2020 - 2021**

I created an SDK for the novel embedded BendShape Sensor in C++ and Python. Involved building examples, GUIs, and detailed documentation.

TOPAZ LABS
Product Engineer   **2020 - 2020**

I was given control of Video Enhance AI and tasked with improving the NPS score.
- Exceeded the goals set for me and raised the score from 5 to 40 in 90 days by talking with customers to identify their needs and then adding features based on feedback
- Served as the scrum master for the team and often balanced competing priorities

ACM SIGGRAPH
Reviewer   **2020 - 2021**

I had the honor to be invited to be a reviewer for the SIGGRAPH 2020 conference.
- Researched the topics presented so that I could provide fair reviews
- Honed my ability to learn new technological concepts quickly

PRODUCTION RESOURCE GROUP (PRG)
Software Engineer   **2019 - 2020**

I was on a small team working on the Mbox Media Server. The software allows live playback of video while adding effects, transitions, and visual corrections in real-time.
- Built a new warping and keystone visualizer interface to improve user experience
- Implemented a plan for a new network communication protocol

MISAPPLIED SCIENCES
Lead Software Engineer & Media Designer   **2016 - 2019**

I brought a new technology, Parallel Reality, to life. I led the company's software development covering everything from low-level hardware communication to product demos.
- Built an API and GUI application with 2D and 3D interfaces for designing experiences
- Developed a computer vision based calibration procedure and user-friendly GUI
- Created a full suite of creative demonstrations that utilize tracking technologies, web apps, and complex generated content for investors, clients, and media

THE WALT DISNEY STUDIOS
Software Engineering & Research Intern   **Summer 2015**

I worked in the Technology Innovation Group within the Studio exploring new technologies such as light field video, distributed video processing, and encoding.

EDUCATION

STANFORD UNIVERSITY
B.S. Computer Science & Theater Minor   **2012 - 2016**

Topics Studied:
Abstractions, Methodology, Memory, Concurrency, Networking, Assembly, Rendering, Shading (GLSL), Texturing, Vectors, Quaternions, Linear Algebra, Raytracing, Unity Game Engine, Computational Imaging, Imaging Systems, Computer Vision, Digital Photography, Color Spaces, Lightfields, Linux Development, Java

Major Projects:
- Capstone Project - Inexpensive LED Video Wall
- Computational Imaging Final Project - Lightfield Video Technology
- Unity Video Game - CHNOS

PUBLICATIONS & AWARDS

ADAPTIVE ENVIRONMENTS WITH PARALLEL REALITY
Presented a talk on how Parallel Reality can be used to help people thrive in difficult environments at SIGGRAPH 2019.

INEXPENSIVE ARDUINO-BASED LED VIDEO WALL
Published in TD&T 2016 Summer issue. Presented at the International Lighting Symposium in Hong Kong, the Stanford Center for Image Systems Engineering, and the 2016 USITT Conference & Stage Expo. Recipient of award from Managing Director of Garage Technology Ventures and the Herbert D. Greggs Award from USITT. Full Text: www.mattl.info/publications/

WYSIWYG LIVE FIXTURE CONTROL
Paper published in TD&T 2015 Winter issue involving the live control of moving lights as follow spots. Full Text: www.mattl.info/publications/