

# HENRY LUENGAS

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## EDUCATION

<b>California Polytechnic State University – San Luis Obispo</b>	College of Engineering Bachelor of Science in Computer Science	Sep 2015 – Jun 2020
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## SKILLS

<b>Programming Languages</b>	Python, C, C++, JavaScript, Julia, Rust, Elm
<b>Systems and Frameworks</b>	Linux/Unix, Vue.js, Docker, SQL, OpenGL, OpenCL, Unity3D
<b>Network Infrastructure</b>	Routing, Switching, VLANs, Network Attached Storage, POE, Cabling

## EXPERIENCE

<b>Network Engineer I</b> – AT&T Technology Development Program – Dallas, TX	Jan 2021 – Present
<b>Specialized Networks Consultant</b> – Mobility & IoT Professional Services	
<ul style="list-style-type: none"><li>Implemented a containerized video transcoding server, to stream 5G camera footage to internet video platforms using Docker and FFmpeg.</li><li>Served as an administrator for the AT&amp;T 5G Technical Associate Certification Course</li></ul>	
<b>Data Steward</b> – Network Cloud Blue Train Fabric Automation Team	
<ul style="list-style-type: none"><li>Automated cleaning and reformatting process for physical and virtual network device setup data used by AT&amp;T's internal cloud platform using Python and Excel</li></ul>	
<b>Web Developer</b> – TDP Internal Website	
<ul style="list-style-type: none"><li>Developed new front end features for the TDP internal website using Vue.js</li></ul>	
<b>Network Lead</b> – TDP Hiring Team	
<ul style="list-style-type: none"><li>Created technical interviewing procedures for the Network Engineer hiring process</li><li>Lead training sessions for TDP technical interviewers</li></ul>	

## CERTIFICATIONS

<b>SAFe 5 Agilist Certification</b>	Mar 2021 – Present
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## PROJECTS

### Tie-Dye Pixel Art Renderer

- Wrote a renderer in Python with the goal of investigating various methods of process acceleration
- Implemented JIT compilation using NumPy and Numba to show the drawbacks of the Python interpreter
- Implemented sequential and parallel running modes to investigate the performance of CPU parallelism
- Implemented a GPU compute mode with OpenCL to show how the process scales to hundreds of workers
- Implemented an R\*Tree spatial data structure to display the speedup possible with an optimized algorithm

### 3D Marble Run Platformer Game

- Collaborated with a group to create a game from scratch in C++ and OpenGL
- Features include physics simulation, a spatial data structure, PBR shaders, shadow-mapping, environment mapping, view frustum culling, positional audio, enemy AI, and an adjustable third person camera

### AI Video Summarization Tool

- Worked with a group to create a utility to pare down security camera footage using AI image recognition
- Developed in Python using YOLOv3 for object detection and OpenCV for image manipulation

### Networked Chat App and Packet Analyzer

- Wrote client and server programs in C that use TCP to convey custom message packets between users
- Created a utility in C that uses NPCAP to inspect packets, functioning like a basic version of Wireshark

### System Building & Networking

- Built a virtualization server to use as a NAS, DNS resolver, Sophos UTM security gateway, and Docker host

## ADDITIONAL INFORMATION

**Work Eligibility:** Eligible to work in the United States and Canada with no restrictions