

# LINH KHANH NGUYEN

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## EDUCATION

### University of California, San Diego

San Diego, CA

BS Computer Engineer

### San Jose City College

San Jose, CA

AS Mathematics AA Scientific Inquiry & Quantitative Reasoning

AA Social & Behavioral Sciences

## WORK EXPERIENCE

### Picarro

Santa Clara, CA

*Test Engineer*

Current

- Configure, execute, and validate system-level manual and automated tests to ensure products meet engineering and performance specifications.
- Perform hardware, firmware, and embedded system diagnostics to identify root causes of system-level failures.
- Analyze system performance and test results using Python scripting and log analysis to identify anomalies and reliability issues.
- Reproduce and isolate product and field-return issues, supporting engineering teams through debugging, validation, and resolution.
- Collaborate with hardware, firmware, and software engineers to drive technical issues to closure across development and manufacturing stages.

## PROJECTS

### Personal Portfolio Website

**React Js, HTML, CSS**

- Designed a responsive and interactive personal portfolio website using HTML, CSS, and React Js.
- Optimized for seamless user experience across various devices and screen sizes.

### CRDS Outliner Analysis

**Python, Embedded Systems, Hardware Debugging**

- Investigated signal loss in cavity ring-down spectroscopy systems using an Arduino-based detector.
- Analyzed detector behavior across varying gains to optimize system performance and hardware interaction.
- Applied data-driven Python analysis to correlate electronic and optical system behavior, aiding troubleshooting and optimization.

### Data Compression - Huffman Tree

**C++**

- Implemented file compression and decompression using Huffman encoding.
- Strengthened understanding of data structures, system efficiency, and low-level computation.

### Undirected Graph Construction

**C++**

- Implemented graph structures, Dijkstra's algorithm, and Kruskal's algorithm.
- Reinforced problem-solving skills relevant to system architecture and performance analysis.

### Video Game Recommendation System

**Python, TensorFlow**

- Developed a data-driven recommender system using Python and TensorFlow to process and analyze large-scale user interaction data.
- Implemented a Bayesian Personalized Ranking (BPR) model to predict user behavior and optimize system output accuracy.
- Evaluated and refined algorithm performance through iterative testing and error analysis, reducing mean squared error and improving result reliability.

## TECHNICAL SKILLS

### Programming Languages:

C++, Python, C, Java, ARM, System Verilog, HTML, CSS, JavaScript, ReactJs.

### Tools and Technologies:

Git, GitHub, MATLAB, Jupiter Notebook, Netlify, LTSpice, TensorFlow.