

Mingjing Huang

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PROFILE

Creative and energetic awesome product architect/artist with extensive experience in complete hardware product development cycle from design to manufacturing. Offering consulting services including hardware architecture, system and digital design for consumer electronic devices, as well as project management for hardware inclusive products. Excellent communicator and has a knack for clarifying and solving complex problems through integration of insights from disparate perspectives. Shipped products at >1 million volumes for Cisco and Apple, created prototypes for the advance development groups at Lab126 and Nokia at small quantities, and architected BLE enabled wearables. Has a strong interest in user and value focused designs, and passionately believes in creating simple, artful, and delightful products. Principal inventor for 10 granted patents.

EXPERIENCE

Principal, Essence Engineering, San Francisco, CA

2013-present

Designed and built polished prototype IoT and medical devices for both large companies and stealth mode startups. Lead artist for external lighting for Temple of Direction, Burning Man 2019. Designed and lead build team on electronics for Giant Rainbow Bridge at Burning Man 2018, a 75-ft wide, 30-ft tall climbable sculpture with 25,000 LED's, 56 power supplies, and multi-channel audio input interactivity feature. Lead electrical design for Sea of Light — a large scale LED art installation in NYC made up of 11 sculptures with 235,000 LEDs. While working with Synapse, tech lead for AM335x ARM Cortex CPU based product slated for low volume production. Worked with small cross-functional team (ME/EE/SW/FW) to design and build 5+ alpha phase cosmetic units used in in-situ user testing. Designed and built PCB's to support other LED artists and enthusiasts as well as the open source hardware community.

Product Architect, Basis Science/Intel, San Francisco, CA

2015-2016

Product co-owner (along with ID and product management) that drove product definition and architecture through ID/UX exploration, concepting, to prototype for next generation wearable device. Technical lead for ME and EE team that built on wrist test platform for biometric sensor system. Defined project schedule, design best practices processes and issue tracking process for team of 7 engineers. Managed project requirements, resource requests, cross functional coordination, and technical aspects of management team presentations.

Sr. Hardware Integrator, AEHW group, Nokia Inc., Sunnyvale, CA

2012-2013

Exploring new product and UI concepts in polished prototypes in 10-50+ quantity. Architected, designed, and built CE concept prototypes. Drove schedule and requirements for cross functional team (ME, SW, FW) and managed external consultants. Initiated cross team project and hacked Linux code to complete successful demo for CEO and board members.

Sr. Hardware Design Engineer, Lab126/Amazon, Cupertino, CA

2010-2011

Collaborated with small team in early product feature definition through creative technology application and invention. Built multiple fast turn prototypes for proof of concept then presented to senior executives.

System Integrator, Apple Inc. Cupertino, CA

2005-2008

Tech lead for iMac graphics, managing both GPU vendor and factory engineers. Worked closely with OS software, mass storage, display, EMC, audio, product design, industrial design, and operations to deliver new products within a 9-month development cycle. Designed, validated, and debugged subsystems including graphics (LVDS, TMDS, TVout, VGA), USB, Ethernet, PCIE, SATA, interconnects. Collaborated extensively with manufacturers Quanta and Foxconn on DFM, engineering build and test process and product quality. Created AppleScript based application to optimize failure reporting process at prototype builds and support fast development cycles.

Shipping products: last generation PowerPC iMacs, educational iMac and cost reduction, new iMacs release 07 and 08, iPad0.

Team Lead/Hardware Engineer, Cisco Systems, San Jose, CA

2000-2005

FW and HW design of extreme cost sensitive 8051 based SoC product including interfaces to LCD, flash, UART, key input, PWM LED. Lead cross-functional team as a system level design engineer and supported factory and customers post mass production.

Shipping products: Cisco 7971G-GE, 7970G, 7960G, 7960, 7940, 7910, and 7914 – totally 33million+ units in 10 years.

EDUCATION

California Institute of Technology, Pasadena, CA – B.S. Engineering and Applied Sciences 1999

SKILLS

Proficient with Concept HDL, Allegro, Altium, Eagle CAD, Jira, Confluence, Excel, Omnigraffle, Slack

Programming languages: C, C++, Apple Script, shell script

Fluent in Mandarin Chinese.

Poetry composition on demand. Karaoke superstar. Improv violinist. Builder of wings. Competitive meditator. Yogi. Purpose seeker.