

Marko Ritachka

✉ markomarkor@gmail.com | ☎ (530) 739-8910 | 📍 San Diego, CA | 🌐 markoritachka.com

Education

University of California, San Diego

B.S. IN COMPUTER SCIENCE

San Diego, CA

Sep 2015 – Jun 2019

Work Experience

Incept 3D

San Diego, CA

FULL-STACK ENGINEER

Oct 2018 – Present

- Created Lana, a full suite of software for managing a 3D printing business, including customer management portals, end-to-end client tools for uploading, organizing, and purchasing designs, as well as project organization and delegation features
- Designed and scaled a network to handle hundreds of high-network-volume 3D printers on the manufacturing floor
- Designed and manufactured an in-house line of FDM-based 3D printers. These were aimed to fill a hole in the market for high-performance large-volume machines that could easily integrate with 3rd party services
- Developed web-based tools for integrating control and monitoring of over a dozen brands of 3D printers
- Implemented a re-branding campaign to help make 3D printing more approachable to customers of all skill-levels, including development of an article-style knowledge database, and conducting user experience studies on the manufacturing industry
- Created a suite of web-tools for managing employees, delegating tasks, team collaboration, and tracking day-to-day goals
- Developed and maintained various types of enterprise servers, including a suite of server-less cloud functions, website hosting, and in-house servers running a custom 3D model analysis and rendering pipeline

Independent Consulting and Technology Services

California/Remote

2011 – 2019

- Consultant for schools and maker-spaces on establishing 3D printing hardware in their labs
- Provided 3D printing and design services to various clients, typically for early product prototyping
- Provided various IT services for clients in the Trinity County area, including computer, network, and security systems installation
- Technical director at a concert theatre managing lighting and sound for various performances

Bizepi LLC

San Diego, CA

LEAD SOFTWARE ENGINEER

Nov 2015 – Jun 2017

- Main developer for a startup aimed to create a marketplace for local services, published on iOS in Sep 2016

Skills

Programming Languages: Javascript/Node.js, Python, C++, Go, Swift, Java, HTML/CSS

Web Development: Vue.JS/Vuetify, React, Typescript, PWAs, Webpack, Heroku, Firebase/Google Cloud, AWS

Integrated Circuits: Raspberry Pi, Arduino, FPGAs, Soldering, Circuit Design, Power Management

Manufacturing Design: Firmware development (Marlin, Duet, Klipper), PCBs, system integration, & web service design

Automation: Extensive API Integration experience for tight vertical integration of hardware and software pipelines

Software Infrastructure: Server-less cloud infrastructure, & various database schema experience (relational, NoSQL, distributed)

3D Graphics/Modeling: Interactive real-time web renderings & manufacturing analysis of 3D models and toolpaths

User Experience: Responsive design, UX studies/AB testing, with focus on easy client/developer communication

Other Tools: Fusion 360, Adobe Software Suite, Git/GitHub pipelines, Windows/Mac/Linux systems, Bash scripting

Soft Skills: Systematic problem diagnosing, collaborative project development, and focus on good documentation

Projects

Web & Mobile Apps

iOS, Android, Swift, Kotlin, Java, C#

SILHOUETTO (DEPTH-BASED IMAGE FILTER TOOLS), VR-BASED MINIGAMES (FOR OCULUS AND GOOGLE CARDBOARD), AND EVENT-SPECIFIC APPS (SUCH AS A REMOTE FOR RC-CAR COMPETITIONS AND A LIGHTING CONTROLLER)

Electronics/Internet-of-Things

ArduPilot/Arduino, Python, OpenCV

CUSTOM DESIGNED QUADCOPTERS, ELECTRIC LONGBOARDS, PIEROGI/PASTA EXTRUSION, PANCAKE ART PRINTERS, AND VARIOUS INTERACTIVE FILM-PROPS (SUCH AS A WEARABLE ARTICULATED IRON MAN SUIT, AND AN ANIMATRONIC SORTING HAT FROM HARRY POTTER THAT WIRELESSLY MIRRORS A HUMAN'S VOICE AND FACIAL EXPRESSIONS)