



# Marko Ritachka

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 github.com/Vivalize

## INTRODUCTION

Passionate computer science student seeking to immerse my technical and collaborative skills into a professional setting. Extensive experience working in both independent and team environments. Practical knowledge of development on both simple and complex levels. Versatile, reliable and able to learn new skills on the fly.

## WORK EXPERIENCE

### Manufacturing/Web Development Intern | Incept3D

Sep. 2018- Present | San Diego, CA

- Primary full-stack developer for a web app to streamline the process of purchasing high-end SLA 3D-Printed parts through the company
- Assisted in the modeling, analysis, and manufacturing of various products from clients

### Head Software Developer | Bizepi LLC

Nov. 2015 - Jun. 2017 | La Jolla, CA

- Main developer for a start-up recently established with a partner
- App released onto the iOS App Store in September 2016

### Independent Consulting and Technician Services

2011 - Present | Various Cities

- Consulted by two schools to facilitate the purchases of their first 3D printer
- Provided 3D printing and design services to clients and events for product prototyping
- Provided independent computer setup and repair for various clients
- Technical director at a concert theatre managing lighting and sound for plays and concerts

### Project Lead | Various UCSD Student Organizations

2016 - Present | La Jolla, CA

- Restarted Triton3D, a UCSD student org focused on 3D Printing and rapid prototyping
- Served as President, Events Lead, and Marketing Lead for Quidditch at UCSD for multiple years, leading several large 400+ person events while establishing a long-term brand
- Worked with UCSD AUVSI to repair a 3D Printer used for aircraft frame manufacturing

#### Apps

- **Bizepi** (Swift/Firebase) - iOS app that lets users discover and contact local freelance services
- **What's That Food?** (Java) - Android group project that logs/explores your everyday meals
- **Silhouetto** (Swift) - iOS app that utilizes depth data to apply custom "3D" filters to pictures
- **VR Mini Games** (C#/Unity) - Including a spatial music visualizer and VR physics demonstration

#### Web

- **markoritachka.com** (HTML/CSS/Javascript) - Personal site utilizing various web frameworks
- **eagle-re.com** (HTML/CSS/Javascript) - A real estate website implementing local IDX databases
- **quidditch.ucsd.edu** (CSS/Wordpress) - Custom branding and graphic design for a student org
- **Other Tools** (Node.JS, Firebase, & more) utilizing media queries, databases, and animations

#### Electronics

- **Custom Electric Longboard** powered with an Arduino and a VESC controller
- **Animatronic Harry Potter Sorting Hat.** Movement & voice wirelessly controlled with computer vision
- **Replica Iron Man Suit** with custom HUD and Arduino controlled sensors, lights, and motors.
- **Arduino-based Laser Tag** system in a wand form factor designed for scalability and modularity
- **Custom Quadcopter** 3D Printed with 3D FPV, gimbal, and modularly designed frame.

#### 3D Printing

- **Custom 3D Printers** built from scratch with modular designs and custom firmware
- **Pancake Printer** that extrudes and bakes batter in a greyscale form of an inputted image
- **Full-color CYMK(W) Extruder** based on hot-end filament-fusion and custom Gcode post-processing

## EDUCATION

### UC San Diego

B.S. - Computer Science  
Expected Graduation: June 2019

#### Undergraduate Courses:

- Advanced Data Structures
- Software Tools and Techniques
- Algorithm Design & Analysis
- Intro to Computer Architecture
- Principles of Operating Systems
- Digital Component System Design
- Theory of Computation
- Computer Graphics and Vision
- Human Computer Interaction Design
- Engineering Psychology
- Computer Security

## SKILLS

#### General Use

Python • Java • C • C++ • Swift • Go

#### Web Development

HTML • CSS • Javascript  
Angular • Bootstrap • Firebase

#### Composure

Git • Adobe Creative Suite • LaTeX  
Various CAD/3D Printing Software

#### Systems

Windows/MacOS/Various Linux  
iOS/Android • Arduino • Raspberry Pi

#### Languages

Fluent in English & Ukrainian  
(Learning Mandarin & German)

#### Other

First Aid and CPR/AED certified

## INTERESTS

### Technology

- 3D CAD and 3D Printing
- Virtual/Augmented Reality
- Arduino, Raspberry Pis, FPGAs
- Machine Learning
- Creating/Modding Video Games

### Recreation

- Aerial Cinematography
- Piano, Violin, Guitar, Theremin
- Surfing, Quidditch, Gymnastics
- Camping, Hiking
- Cinema and Film History