

# Mikel Matticoli

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## EDUCATION

**Worcester Polytechnic Institute [WPI]** — Worcester, MA

B.S. Computer Science + B.S. Interactive Media and Game Development

Minor in Media Art + Minor in Robotics Engineering

May 2021

M.S. Interactive Media and Game Design

May 2022

## PROFESSIONAL EXPERIENCE

**Technology Consultant** — Bloomberg LP *Dayton, NJ*

Jun 2019 - Present (Full-Time, Summer + Part Time, Year-Round)

- Design, build & maintain a custom web app template to streamline web integration with legacy infrastructure (Python Flask+React+Docker+PaaS)
- Create python library for internal Single Sign-On (OAuth2.0+OpenID)
- Develop Jupyter Notebook reports to aggregate and visualize usage metrics for critical internal software (Numpy+Pandas+Bokeh)
- Led Augmented Reality research and development team
- Researched and identified use cases for AR in a datacenter environment
- Created and implemented 3D assets (models, textures, animations)

**Project Manager** — WPI Global Lab *Worcester, MA*

Sep 2018 - Present (Part Time, School Year)

- Provide technical training & technical expertise to students and faculty
- Showcase uses of AR/VR and media technology for global engagement
- Write and maintain intuitive and accessible documentation on equipment

**Research Assistant** — WPI IMGD x. Bose *Worcester, MA*

Aug 2019 - Dec 2019 (Part Time, School Year)

- Worked with IMGD/CS faculty at WPI on Bose-sponsored research
- Researched use cases for spatial sound in consumer AR apps
- Created room-scale soundscape app using BoseAR SDK + ARCore in Unity

**Datacenter Intern** — Bloomberg LP *Dayton, NJ*

Jun 2017 - Aug 2017 (Full-Time, Summer Internship)

- Participated in technical aspects of datacenter maintenance/operations
- Worked on hardware troubleshooting & workflow automation (Python)
- Developed internal web portal/REST API for monitoring power statistics
- Attained familiarity with Agile/Scrum methodology

**Software Engineering Intern** — SelfMade Co. *New York, NY*

Jun 2016 - Aug 2016 (Full-Time, Summer Internship)

- Added several major features to customer communications/CRM web app
- Added Slack app, canned response/autocomplete and mobile UI support
- Gained proficiency with NodeJS Ecosystem, MeteorJS, ReactJS, and SCSS

**iOS Development Intern** — UpSwerve Inc. *New York, NY*

Jun 2015 - Aug 2015 (Full-Time, Summer Internship)

- Added video capture and sharing features (NodeJS+Objective-C), as well as minor features and bug fixes for Snapchat-like iPhone app *Camera Club*
- Attained proficiency with Git, NodeJS+SQL, iOS, and code review process

## SKILLS

**Spoken & Written Languages**

Spanish (Native), French (Proficient)

**Programming Languages & Frameworks**

★★★★★ Web (HTML, CSS, JS, JSON, JQuery)  
★★★★★ NodeJS (React, FireBase, Express)  
★★★★★ Python (Flask, REST/SQL, PyLint)  
★★★★★ Java (Desktop, Android, Enterprise)  
★★★★☆ C# (Microsoft DEV204x Certified)  
★★★★☆ C / C++ / Make  
★★★★☆ MySQL / SQLite / MongoDB  
★★★★☆ Google Cloud Platform  
★★★★☆ Apache2 / HAProxy / Wordpress  
★★★★☆ Docker / AWS / Azure Cloud  
★★★★☆ Objective-C / Xcode

**Software & Tools**

★★★★★ Microsoft Office Suite / G Suite  
★★★★★ Linux / CLI (Debian, RHEL, Arch)  
★★★★★ Git / GitHub / GitHub Enterprise  
★★★★★ Adobe Premiere / Video Editing  
★★★★★ Unity3D (VR/AR, Games, Tools)  
★★★★★ Unreal Engine (Blueprint and C++)  
★★★★☆ Photoshop / GIMP (Image Editing)  
★★★★☆ Autodesk Maya (Model, Rig, Anim)  
★★★★☆ Pixologic ZBrush

**Miscellaneous Skills**

★★★★★ Human-Centered Design (UI/UX)  
★★★★★ Professional Writing / Documentation

## ACADEMIC HONORS/AWARDS

IMGD Community Leader Award 2020

Provost MQP Award 2020

President's IQP Award Finalist 2020

Dean's List 2018-2020

VEX Robotics Scholarship Award 2017-21

WPI Unity Scholarship Award 2017-21

Hispanic Scholarship Fund Scholar 2018-20

## MAJOR EVENTS / COMPETITIONS

MassDiGi Game Challenge '20 - Runner-Up

VEX U Worlds 2019 - Innovate Award

Hack@WPI '19 - GitHub Instructor/Expert

HackForVenezuelaNYC '19 - Organizer

HackForVenezuelaWPI '18 - Lead Organizer

2017 SB Entrepreneurial Fair - 1st Place HS

MontyHacks 2017 - Best Educational Hack

HackSBPL 2017 - Founder/Lead Organizer

HackSBHS 2016 - Founder/Organizer

NJ VRC States 2015 - Robot Skills Champion

## HIGHLIGHTED COURSEWORK

Human-Computer Interaction, Game Design, Immersive & Embodied Interaction, 3D Modelling, Animation, Motion Capture, Foundations (Theory) of CS, Cognitive Psychology, Webware, Game Audio I-III, AI, Graphics, Robotics I-III, Object-Oriented Design, Software Engineering, Systems Programming, Operating Systems

## VOLUNTEER EXPERIENCE

### Software Engineer — JazzHistoryDatabase, Inc. Worcester, MA

Mar 2019 - Present

- Design, develop, deploy a specialized content management system (CMS) for JHDB correspondents to use globally
- Coordinate teams of university students in developing and maintaining CMS using Agile methodologies
- JazzHistoryDatabase is a non-profit archival effort of jazz artifacts and culture, with contributors around the world
- Tools used: NodeJS, React, Firebase, GitHub, Google Cloud Platform (App, Compute, Cloud Build), HAProxy

### Robotics Coach / Advisor — South Brunswick Schools South Brunswick, NJ

Jun 2019 - Present

- Provide instructional support and mentorship for South Brunswick High School's competitive robotics teams
- Work with South Brunswick High School staff to coordinate finances and logistics for the teams
- Organize/host VEX Robotics Competition event as an event partner of the Robotics Education Competition Foundation

### Co-Founder, Systems Administrator — InnovateVenezuela New York, NY | Boston, MA

Nov 2018 - Dec 2019

- Connect with developers, entrepreneurs, students and professionals within the LatinX community
- Organize hackathons and networking events for student and professional audiences
- Support the development of actionable technological solutions to Venezuela's humanitarian crisis
- Maintain website, open-source GitHub Organizations, and support long-term development projects

## RECREATIONAL EXPERIENCE

### Systems Administrator / Treasurer — WPI Association of Computing Machinery

Mar 2018 - Present

- Organize technical workshops for WPI Community members
- Coordinate logistics for Hack@WPI and other ACM workshops/events
- Manage budget and process purchase orders and expense reports for ACM hackathons and computing-themed events
- General Sysadmin work: Maintain ACM Linux Mirrors, website, and Ubuntu cluster (<https://acm.wpi.edu>)
- Tools used: Google Sheets/Excel, Ubuntu, Ansible, Docker, nginx, Wordpress

### Competitive Robotics - Programmer / Treasurer — WPI Robotics Club

Aug 2017 - Present

- Project lead for VEX Artificial Intelligence Competition (research and software development)
- Active member (driver, programmer, team logistics) on WPI's competitive VEX U team
- Qualified for 2018 VEX Worlds Championship through driver skills
- Manage budget and process purchase orders and expense reports for team supplies
- Travel planning for VEX Worlds 2019 trip to Louisville, KY

### Co-Founder / Systems Administrator — International Game Developers Association - WPI Chapter

Aug 2017 - Dec 2020

- Helped plan and execute meetings/activities to help club members develop game development and professional skills
- Attained funding and support for bi-monthly Game Jam events
- Assisted with marketing and logistical planning of club meetings/events
- Designed, built and deployed website to enable chapter members to showcase their projects (<https://igda.wpi.edu>)

### Programmer / Technical Artist — Trumbus Games

Jan 2019 - Aug 2020

- Assisted with all aspects of design, development, and release of The Call of Karen (<https://callofkaren.com>)
- Implemented event/state system and game save in Unreal Engine C++
- Built level loading system and several gameplay mechanics using UE4 Blueprint
- Designed and implemented user interface for in-game menus
- In-engine implementation of art, including custom Animation Blueprints
- Created custom subtitle engine and UI localization (English, Spanish, French, Chinese, Russian, Portugese, Polish, Japanese)
- Developed/maintained Call of Karen website and assisted with pre and post-release marketing and community management