# Mufeng Yang

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## EDUCATION

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| **New York University** | New York, NY |
| **M.S.** in **Computer Science** (Academic Scholarship) | *Starting Sept. 2021* |
| **New York University** | New York, NY |
| **B.S.** in **Computer Science**; Minor in Mathematics, Creative Writing | *Sept. 2017 – May 2021* |

## TECHNICAL SKILLS

**Programming Languages:** Python, C/C++, Java, Go, CSS 3/HTML5, JavaScript, NoSQL/MySQL, C#
**Tools/Frameworks**: GameMaker Studio 2, GitHub, ReactJS/Vue.js/Node.js, REST API, Unity, Ubuntu/Linux, Android Studio, Docker, NumPy, Panda, Firebases, Apache Tomcat, Figma, Illustrator

## WORK EXPERIENCE

**Srod's Universe,** *Freelance Game Design* — *01/2021 – Present*
- Designed and developed a 2-D psychedelic platformer game using **GameMaker Studio 2** and **Procreate**, aiming to help a real world music artist Steven Lousima (also known as *Srod*) for character merchandising
- The game is consisted of three levels, seven types of AI enemies, and four animated transition scenes
- Integrated **gamification** marketing to the game design: using *Srod*'s music as background music for the game; winning a promo code for merchandise after completing the game
- Increased traffic to *Srod*'s commercial website by **200%+**

**Game Design, NYU Computer Science Department,** *Teaching Assistant* — *02/2021 – 06/2021*
- Collaborated with a graduate TA to lead lectures and gradings on **Game Design** of 25 undergraduate and graduate students
- Taught students to understand course concepts thoroughly. By the end of the course, 12 students successfully learned to deploy **Human-Computer Interaction** concepts to enhance **UX** (user experience); 15 students were inspired to think outside of the box to uniquely present game stories, design **resource systems,** and boost player experience through implementing more explosion, adding movement effect, and creating larger reward objects

**EvolvE Gaming,** *Software Engineer* — *01/2020 – 06/2020*
- Co-founded, designed, and developed a software app for a start-up that aimed to help gamers retain relevant game data and insight to compete at an esport level
- Innovated a prototype utilizing **OpenCV** tracking APIs (MIL and KCF) to detect and track objects on game recordings
- Led the start-up to the **semi-finalist** of **NYU InnoVention Competition 2020**

## PROJECTS

**Distributed Shopping List Application** *Go, Iris Go, Linux* — *09/2020 – 12/2021*
- Built a full-stack application that allowed multiple users accesses to their shopping lists online in **Go**
- Increased **scalability** and expanded the option of providing alternate front-end interfaces by splitting the server into front-end servers that handle HTTP requests and back-end servers that store data
- Achieved **multithreaded** back-end/allowed acceptations of multiple concurrent HTTP requests by implementing distributed lock using **mutexes**
- Fulfilled decreasing data loss and reducing reboot time by implementing a **replicated data store** across several back-end servers using the **Multi-Paxos algorithm** as a replication strategy and manual **unit testing** to ensure **fault tolerance**

**PetMates** *Python, Vue.js, React, HTML, Firebase, Figma* — *02/2021 – 05/2021*
- Designed and developed a "Tinder-like" swipe and match **SPA** (single page application) for potential pet shelters and interested adopters
- Built a front-end with an easy-to-use UI for viewing shelters information, handling user input with forms, and rendition of pets selections as swiping-cards using **Vue.js** framework, utilizing **AXIOS** in **React** to handle **HTTP** requests
- Implemented back-end features: like/dislike counts for shelters, favorite pets list for users using **Google Firebase** database
- Improved team communication and workflow by deploying the **agile scrum** method and documenting **SRS**

**Picture to Speech Application** *Android Studio, Cloud Vision API, Docker* — *07/2019 – 10/2019*
- Produced an **Android** mobile application to assist people with visual disabilities on reading tasks
- Built a client-side app to access camera and photo gallery, translate images to text by deploying **Google Cloud Vision OCR**
- Achieved **multithreading** in sending images to the server with HTTP requests by using Java Runnable
- Increased scalability and flexibility of the service by creating **Google Compute Engine** instance, building a **Docker** application image, and deploying the image to **Kubernetes cluster**

**Photo-Sharing Application** *Python, MySQL, Flask, Figma* — *04/2020 – 05/2020*
- Designed and developed a picture-sharing **MVP** (minimum viable product) where users can post, view, like, comment, and share photos, share locations and posts in a group chat, sign up, and log in/out
- Built a **MySQL** database to persist user data and handled HTTP requests and data using **Flask** micro-framework