Mufeng Yang

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EDUCATION

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, C#
Database: MySQL, PostgreSQL, MongoDB
Tools/Frameworks: Git/Github, React/Vue.js, Node.js, Express.js, Redux, Android Studio, Unity, GameMaker Studio 2, Ubuntu/Linux, Docker, NumPy, Panda, Postman, Firebase, 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*) with character merchandising
- The game consists 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; players received a promo code for merchandise upon 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*

- 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**

Face Recognition Application *Javascript, HTML/CSS. React, Node.js, PostgreSQL*

- Produced a full-stack web application that can recognize faces from user's uploaded images utilizing Clarifai API
- Built a front-end that can log in/out, view account rank, upload images, and view face recognition results using **React**
- Developed back-end features using **Node.js**: storing image URLs, viewing rankings and user information, signing in/out authentications, securing user passwords with Bcrypt; store users data with **PostgreSQL** database; deployed to **Heroku**

PetMates *Python, Vue.js, React, HTML, Firebase, Figma*

- 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*

- 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**