Ryuki Kobayashi

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EDUCATION

Texas A&M University **College Station, TX**
Master of Computer Science Aug 2020−present
- Graduation anticipated in May 2022
- Relevant Coursework: Software Engineering; Analysis of Algorithms; Artificial Intelligence

University of Tokyo **Tokyo, Japan**
Bachelor of Science, Earth and Planetary Science (GPA: 3.20/4.00) Apr 2010−Mar 2015
- Scholarship recipient (Students and Researchers Exchange Program in Sciences)

TECHNICAL SKILLS

Programming Languages: Proficient in C#, Python, VBA, HTML/CSS; familiar with C, JavaScript, Ruby

Tools: Unity, OpenCV, Microsoft Azure, UNet, Git, TensorFlow, React.js, Ruby on Rails, AWS, Unix

PROJECTS

PhD Admission System for Texas A&M University Aug 2020−Dec 2020
- developing and deploying a web application with **React.js** frontend and **Express** backend to allow faculties to record, modify, and review applicants' information on **Google Sheet**
- running **BDD** with **Capybara** over 100-plus tests, using the **Cucumber** tool to turn these stories into executable acceptance tests, and running the tests against the **SaaS** app
- automating the process of downloading applicants' files on the web and extracting data with **Apache PDFBox**
- delivering log-in service with **Firebase authentication** to enhance data security

PROFESSIONAL EXPERIENCE

ILLUSION **Tokyo, Japan**
Game studio focused on VR/AR software development, with annual sales of $8 million Aug 2017−Aug 2020
Software Engineer (full time)
- leader of five-member team
- developed the **VR Kanojo** series as a **Unity** engineer; the game generated more than $4 million in revenue
  - implemented a localization system utilizing **Google Sheet** and **CSV files**; utilized **AssetBundle** to save memory
  - constructed an object inertia system in **C#** to help in-game character to predict ball trajectory; utilized **linear algebra**
- led and released **TsunTsun VR** project on Steam; transmitted haptic feedback from virtual character via Bluetooth operating with bHaptics; more than 5,000 downloads
  - deployed multiplayer function via wireless **LAN** using **UNet**

GOKURAKU INC (self-employed) Feb 2019−Apr 2019
- designed a **real-time virtual reality viewer** for *360* movie for dual-fisheye camera with **Unity**
- mapped each pixel of image captured by the camera into dynamically created mesh in **C#**, rendered in real time
- used a video capture board to promote compatibility with **THETA S** by **WebCamTexture**

TOKYO BROADCASTING SYSTEM TELEVISION, INC (self-employed) May 2018
- created **virtual reality training simulator** for *Sasuke* (TV sport show in Japan)
- developed for **HTC Vive** with **Unity** for *Sasuke* professional players, deploying hand tracking with **Leap Motion**
- implemented also for standalone devices (**Mirage Solo**, **VIVE Focus**)

VALQUA LTD **Tokyo, Japan**
Software Engineer in Overseas Business Improvement Division (full time) Apr 2016−July 2017
- analyzed factory workers' movement lane and cut labor costs by 40% utilizing **Python**; trained 100 employees

AWARDS

Tsukumo award in Looking Glass Hackathon, sponsored by Unity Technologies Apr 2019
- developed a holographic viewer for enjoying Japan's four beautiful seasons; released in Looking Glass Library
  - operating with **Xperia TOUCH** to enhance interactive experience

GREE award in Lunar Sports VR Hackathon, sponsored by JAXA May 2018
- developed a VR training simulator of Kendama (Japanese traditional toy) in a low gravity environment
  - utilized a **particle-based physics** engine to create realistic ropes
  - constructed a gravity model to change the behavior of the Kendama ball