

SeongKweon Alex Hong

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EDUCATION	Carnegie Mellon University , Pittsburgh, PA Bachelor of Science in Electrical and Computer Engineering Additional Major in Human Computer Interaction Overall GPA: 3.94 / 4.0	Expected: May 2019
RELEVANT COURSES	Fundamentals of Programming Programming Usable Interfaces	Structural Design of Digital Systems Principles of Imperative Computation Signals and Systems Humanoids
SKILLS	Computer Languages: C, Python, JavaScript, HTML, CSS, JQuery, System Verilog, C#, Java, Swift Applications: Unity, ROS, MatLab, Adobe Photoshop, Sketch, Beautiful Soup, Numpy, matplotlib, vPython, Github, InVision	
PROJECTS	Pre-prosthesis Training Game Development , Pittsburgh, PA <ul style="list-style-type: none">Analyzed user-friendly gestures and ideas for immersive “exergames” for patients in pre-prosthetic stage to practice using arm muscles.Performed competitive analysis on immersive Virtual Reality games and discussed plans to improve the user experience of pre-prosthesis training games with a Focus group in Pittsburgh.Wire-framed and prototyped Flappy Bird in Unity, which receives and processes signal inputs (wrist flex up and extend and grab motion) from a muscle tracking sleeve and performs jumps on the bird.Worked as a Research Assistant of Professor Daniel Siewiorek and Professor Asim Smailagic.	December 2016 - Present
	Teleoperation in VR/AR with Baxter Robot , Pittsburgh, PA <ul style="list-style-type: none">Developed Baxter Robot to imitate user’s arm movement in real time, detected by Leap Motion. The user sees through Baxter’s lens remotely by wearing Google Cardboard, providing VR/AR environment.Implemented a Raspberry Pi webcam server to send live videos of “interpupillary distance” to mobile phone, which would then be attached to the Google Cardboard for the VR experience.Worked with a team of four and Postdoctoral Fellow Akihiko Yamaguchi of Robotics Institute in Carnegie Mellon University.	January 2017 - Present
	Sound File Compatible Game Development in Python , Pittsburgh, PA <ul style="list-style-type: none">Transformed continuous time sound signals of any sound file to discrete time pitches using Fast Fourier Transform to design a replication of the Tap Tap Revenge game.Displayed a 3-dimensional game using vPython, Scipy, Numpy, and Github in a team of four.Won the <i>Best Game prize</i> in Hack112 hackathon in Carnegie Mellon University.	April 2016
	Tank game development , Pittsburgh, PA <ul style="list-style-type: none">Designed “Fortress 2” a user-friendly 2-dimensional tank game, an extension to the game “Fortress2 Red” by Cosmos Entertainment, using pygame in Python and Paint.net.Used pixel color detection and modification to implement terrain destruction and used animations and shading to enhance the user experience in gaming.Initially prototyped in Java as an independent project.	March 2016
	SSTAR Nuclear Reactor Analysis , New York City, NY <ul style="list-style-type: none">Visualized the potential damages in the SSTAR nuclear reactor and the shortcomings related to the spread of radiation by modelling one in Monte Carlo using matplotlib, Scipy and Numpy in Python.Analyzed as a Research Assistant of Professor Brenda Rubenstein in Columbia University.	March 2014 - September 2014
INTERNSHIP	iOS Development Intern at TeddyMozart , Brooklyn, NY <ul style="list-style-type: none">Web scraped songs from public children music domain to design the main page of the TeddyMozart.Implemented voice recording with Firebase, collaborating with the Technical Co-founder of the company.Published TeddyMozart app for iOS in the Apple Store.	September 2016 - February 2017
HONORS	Hack112 hackathon, <i>Best Game prize</i> from “Tap112” Dean’s List: Carnegie Institute of Technology 1 st Place <i>Chemistry and Electrics Circuits</i> in Science Olympiad, University of Connecticut	April 2016 Fall 2015 - Fall 2016 February 2014