

In Tak Hwang

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Research interests	Mathematical Cryptography, Quantum Computing	
Education	Sangsan High School	2015 – 2017
	DGIST	2018 – Present
	B.S. in School of Undergraduate Studies	GPA: 3.99/4.3
	UC Berkeley	2018 Summer
	Summer Sessions, in part of DGIST Freshmen Global Leadership Program (FGLP)	
Honors and scholarships	DGIST Dean's List	2020
	CTF Security Competitions	2020 – Present
	DEF CON CTF 2020	<i>Finalist</i>
	TokyoWesterns CTF 2020 Finals	<i>3rd place</i>
	Midnight Sun CTF 2020 Finals	<i>7th place</i>
	Real World CTF 2020/2021 (Media Coverage)	<i>1st place</i>
		<i>Awarded \$20,000</i>
	PlaidCTF 2021	<i>5th place</i>
	DEF CON CTF 2021	<i>Finalist</i>
Research experience	NIMS Academy for Industrial Mathematics	2019.08
	I studied text-based modeling and big data mining, along with its use in industrial mathematics.	
	DGIST Computer Architecture and Systems Lab (CASLAB)	
	Mentors: Prof. Dae Hoon Kim (DGIST)	2019 Summer
	During Internship, I studied various CPU Side Channel Attacks, such as Flush+Reload and Row Hammering.	
	DGIST Division of Intelligent Robotics	
	Mentors: Dr. Sang Chul Lee (DGIST)	2020 Summer
	During Internship, I studied algorithms for solving localization problems, i.e. determining the local position of autonomous robots.	
	DGIST Undergraduate Group Research Program (UGRP)	
	Mentors: Prof. Hyo Sang Kang (DGIST)	2020
	I participated in two research teams as a part of UGRP. The topics were Game Development and Developing Surface Codes with Uniform Hyperbolic Tiling.	

I developed several games using Unity and (mainly) Godot Engine for the former, and studied Quantum Informatics, Quantum Error Correction, Hyperbolic Geometry and developed Uniform Hyperbolic Tiling Generator for the latter.

Teaching experience	Tutor at DGIST	
	SE102 Multivariate Calculus	2019 Fall
	SE201 Linear Algebra	2020 Spring
	Teaching assistant at KAIST PRE-URP	2021 Spring
	Topic: Making a quantum error correction game	
Skills	Programming	
	Proficient in: Python, \LaTeX , Godot Engine	
	Languages	
	Korean (native), English (fluent)	
Other activities	Translator of elementaryOS	2018 – Present
	Translating several parts, including the website of elementaryOS.	
	Member of CTF team CodeRed	2020 – Present
	Solving crypto challenges in CTF competitions.	
	Developer/Writer of an untitled puzzle game	2020 – Present
	Our puzzle game is under development, and is expected to start beta testing in mid 2021.	
Other interests	My non academic interests include photography, screenwriting, and watching films .	