# Taylor Song (Ju Hyun)

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## EDUCATION

**Stanford University Graduate School of Engineering,** Stanford, CA - GPA 3.81 Sep 2019 – June 2021
School of Mechanical Engineering

**Cornell University, College of Engineering,** Ithaca, NY - GPA 3.43 Aug 2014 – Dec 2017
School of Mechanical and Aerospace Engineering - Dean's List Spring '16, Spring '17
- SAT 2360 (Math 800 CR 760 WR 800) - GRE Quantitative Reasoning: 170/170, Verbal: 163/170, Analytical Writing: 4.5

**Relevant Coursework:** ME 218a Mechatronics, Automotive Engineering, Dynamics, System Dynamics, Statics & Mechanics of Solids, Data Science, OO Programming & Data Structures, Heat Transfer, Osc Waves & Quantum Physics, Thermodynamics, Fluid Mechanics, Linear Algebra, Mechanical Aero Structures, Engineering Probability & Statistics, Differential Equations, Multivariable

## WORK EXPERIENCE

**Samsung Electronics,** *Suwon, Korea* Jan 2018 – May 2019
***Associate Product Manager,*** *IoT Product Planning Group*
- Engaged in hardware design specification, design for manufacturability, reliability test, and quality control to launch Samsung SmartThings Camera and an A.I. speaker product
- Presented solutions to imminent manufacturing issues and handled multiple target timeframes in the product development cycle
- Analyzed recently developed technologies and conducted strategical analysis for future implementation and commercialization
- Developed differentiation plan and positioning strategy, GTM strategy, mid- to long-term roadmap, and portfolio
- Developed IoT service monetization strategy, analysis of pricing, risk mitigation plans, resource plans
- Built effective delivery skills by communicating with professionals of interdisciplinary sectors (Engineers, UX designers, OEMs)

**ASML,** *Wilton, CT* Fall 2016, Summer 2017
***Hardware Engineer Intern,*** *MDev Optical Modules Group*
- Designed in Solidworks and tested assemblies for precision engineering and control in the semiconductor industry (GD&T)
- Performed Finite Element Analysis on NX Unigraphics, and ANSYS to optimize geometry of glass optics and tackle over-constraints introduced by EUV system fixtures
- Conducted data analysis for optimization of liquid flow geometry for epoxy injection between optics and metal
- Developed Matlab interface to process and utilize high volume of on-site raw data collected from client's EUV machines

## PROJECT EXPERIENCE

**ME 218A – Smart Product Design Fundamentals**, *Stanford University, Stanford, CA* Fall 2019
- Mechatronics project for ME 218A at Stanford University. Built an arcade game that interacts with players by analog sensing and non-contact sensing and return feedback with audio and motion
- Developed circuit design and event based motion control coding in C. Designed and prototyped assembly parts through Solidworks, 3D printing, machining, and laser cutting

## ON-CAMPUS ACTIVITY

**Engineers for Sustainable World (ESW),** *Bovay Laboratory, Cornell University, Ithaca, NY* Jan 2015 – Dec 2017
***Project Management Leader***
- Led an interdisciplinary engineering team to design and build photovoltaic (PV) solar panels that generate and store electricity
- Visited Nicaragua with the team to introduce the mylar photovoltaic solar panel and chargers to Groupo Fenix Solar Center as a new source of energy in areas with limited electricity, funded by Cornell University $6,000

**International Genetically Engineered Machine (iGEM) Cornell,** *Cornell University, Ithaca, NY* Jan 2015 – Dec 2017
***Product Development Member***
- Competed in annual competition of synthetic biology inspired project as a hardware product developer
- 2016 Silver medalist: Modeled and developed customizable milking shells incorporating genetically modified *E.coli* to be utilized in farms for prevention and detection of mastitis (http://2016.igem.org/Team:Cornell_NY)
- 2017 Gold medalist: Modeled and developed hydroponics farming mechanism using redox sensor and optogenetic activation (http://2017.igem.org/Team:Cornell)

## OTHER SKILLS / INTERESTS

Skills: SolidWorks, Matlab, NX Unigraphics, ANSYS, Python, JAVA, R, C/C++, Fusion 360, COMSOL, Machining, Prototyping
Interests: Traveling, Pilates, Videography, Fluent in Korean