

Sooyoung Shin

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EDUCATION

Brown University

Master of Science in Physics

Providence, RI
Sep 2021-May 2023

Chung-Ang University (CAU)

Bachelor of Science in Physics

Seoul, Korea
Mar. 2014-Sep. 2020

- Mandatory Military service in ROKAF 5th Tactical Airbase (Oct. 2015-Oct. 2017)

WORK EXPERIENCE

GO Element

Senior Engineer

Nov. 2024-Present

Ansung, Korea

- Developed new high temperature (140°C to 160°C) liquid level sensor to expect 23% higher sales on sensor part
- Enhanced canister lifetime 3 field endurance to 15 lab usage optimizing production level process & improving design
- Managed ALD (Atomic Layer Deposition) pilot project of Oxidized Aluminum film deposition on STS316L

Seaway International

Internship

Sep. 2023-Sep.2024

New York, New York

- Optimized shipping fee related to Suez Canal issue by time-cost curvature using python

Samil PwC

Internship

Jul. 2022-Aug.2022

Seoul KR

- Reported study 'Risk on Dunchon Jugong Apartment Reconstruction' in Hyundai Engineering & Construction
- Drafted revision of internal control program & Reviewed and Translated Semi-annual audit report in KT&G, Pulmuone Foods, and Hyundai Mobis as part of on-site team

RESEARCH EXPERIENCE

Brown University

Presentations:

Sep 2021-May 2023

- Quantum computer transistor using Josephson Junction Qubit
- Energy generation from Rotating Black Holes by Penrose Process
- CPT breaking and Entropy

STM Lab in CAU

Building STM(scanning tunneling microscope) and making 2D samples

Oct. 2018-Feb. 2021

- Constructed Home-built STM system from scratch: Designed 3K dewar and cold finger
- Caught noise from high frequency noise from LN2 boiling, UHV (Ultra High Vacuum) & low Temperature leak
- Operated Superconductivity test of 20+ Twisted Bilayer Graphene samples
- Collaborated with 4 colleagues on study of superconductivity on VdW heterostructure 2D materials such as TBG (Twisted Bilayer Graphene) or TMDCs (Transition metal dichalcogenide monolayers)

Quantum Transport Research Lab in CAU

Sep. 2019-Dec.2019

- Learned Bi-Te-Sb sample manufacture for Seebeck Effect
- Learned semiconductor manufacture : cleaning, photolithography, PVD layer deposit, annealing

LEADERSHIP

Club Activities

Brown University Baseball Club Team

May 2022-May 2023

FinTech@Brown

Sep.2022-May.2023

Chung-Ang University Baseball Club Rendezvous

Apr.2014-Oct.2018

HONORS

- Honoree of Chung-Ang Plus Scholarship

Nov. 2018, Nov. 2019

SKILLS

Computer

R, Python (Entry level), and MATLAB

Soft Skills

Analytical Problem Definition and Solving; Cross-functional Leadership; Strategic & System-level Insight; Innovative Execution

Laboratory Skills

Building Mechanical System; Making Samples of 2D materials

Languages

English(Fluent) and Korean(Native)

RELEVANT COURSEWORKS

- Relevant courseworks: ML using R, using Python, Algorithm, Computational Physics