Ga Eun (Sarah) Yun

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Education	**California Institute of Technology (Caltech)**	Pasadena, California
	Bachelor of Science in Computer Science	Class of 2024
	Cumulative GPA: 4.0/4.0, Major GPA: 4.0/4.0	

Relevant coursework

- Computer Science: Programming Methods (Data Structures), Software Design, Decidability and Tractability, Computing Systems (Fall 2021), Machine Learning (Fall 2021)
- Math: Linear Algebra, Multivariable Calculus, Discrete Math (Fall 2021), Differential Equations (Fall 2021)
- Other: Special Topics in Engineering : Electrodynamic Dust Shielding for Lunar Exploration

Experience

Caltech Division of Aerospace, NASA BIG Idea Challenge Team

Research Fellow   *March 2021 – Present*

- Team named finalist in NASA's design competition and received $180,000 to develop modular electrodynamics dust shield (EDS) for use on moon
- Implemented simulation environment to evaluate effects of collisions with electromagnetic particles on dust-shield design, improving previous simulation workflow throughput by projected 25%
- Integrated simulation results to iterate on dust-shield designs, resulting in increased shield efficacy and cost effectiveness from initial design
- Awarded a Caltech summer fellowship to continue conducting optimization simulations for Caltech BIG Idea Team and Caltech's Center for Autonomous Systems and Technologies laboratory under the mentorship of Professor Soon-Jo Chung

Caltech Ismagilov Group

Research Assistant   *April 2021 – Present*

- Blending traditional epidemiological models with state of the arts machine learning forecasting models to analyze transmission trends of the COVID-19 pandemic
- Performing data curation and data quality control as member of Caltech's COVID-19 research team

Projects

Physics Simulation Engine

April 2021 – June 2021

- Built complete two-dimensional physics simulation engine capable of modeling collisions and forces between concave entities with different masses with accompanying visualization using C language and SDL graphics library
- Wrote complete test suite to verify performance of physics engine and robustness against floating point rounding errors
- Optimized engine speed to support operations in self-developed fast-paced typing game where players must type to destroy bouncing words on screen and gain points

Honors

Dingwall Foundation Korean Ancestry Grant Recipient	2020
U.S. Presidential Scholar Nominee	2020
National Merit Scholarship Semifinalist	2019
Presidential Volunteer Service Award	2019
National Center for Women in Technology (NCWIT) Northern Alabama Winner	2018

Skills

Technical Skills

Python, Java, C, HTML, SQL

Langugaes

Native verbal fluency in Korean, Conversational Spanish

Interests

Yoga, Baking, Sewing, Personal Development, Cats