

# KWANYOUNG PARK

Los Angeles, CA |

[www.linkedin.com/in/kwanyoung-park-0bb182383](https://www.linkedin.com/in/kwanyoung-park-0bb182383)

## EDUCATION

**University of Southern California**

Los Angeles, CA

**Major: B.S. Astronautical Engineering. Minor: B.A. Astronomy**

September 2025-May 2029

- ASTE101; PHYS151; MATH126; TAC168

**Western Academy of Beijing**

Beijing, China

**High School Diploma, IB Diploma**

September 2021-May 2025

## EXPERIENCE

**USC Rocket Propulsion Lab (RPL)**

Los Angeles, CA

**Hands On Astronautical Projects**

- Fabricated composite components, including wet layup testing fins and nozzle layups, to reinforce flight vehicle airframe for a new, higher-thrust solid engine configuration
- Utilized Python and MATLAB to conduct preliminary analysis of structural components and model flight dynamics for team review
- Utilized Flight On Simulation to simulate upcoming rocket launch

**USC AeroDesign Team (ADT)**

Los Angeles, CA

**Propulsion Engineer**

- Calculated precise thrust and battery power output parameters to analyze and mitigate an over-thrust condition in competition aircraft's propulsion system
- Investigated BACK EMF regulation using Electronic Speed Controllers (ESC) and airfoil testing tools to ensure system power remained safely within fuselage's lower capacity margin

**De Laval Nozzle Optimization Research**

Beijing, China

**Independent Research**

- Developed a C++ numerical model to analyze nozzle performance, validated geometry using CAD modeling, and constructed a physical load cell thrust measurement device
- Discovered controlling nozzle entrance angle is an effective primary control for small solid rocket motors, ensuring flow reaches Mach speed before neck

**Soongsil University Semiconductor Devices & Physics Lab**

Seoul, South Korea

**Intern Researcher**

- Conducted advanced material characterization for flexible photonic synapses using XRD, SEM, TEM, and XS equipment
- Performed rigorous mechanical-flexibility checks and contributed to nanofabrication processes for experimental device development

## TECHNICAL SKILLS

Programming & Simulation: C++, Python, MATLAB, Simulink

CAD & Analysis: OpenSCAD, Solidworks (FEA)

Languages: Fluent Korean & English, Intermediate Chinese

## ACTIVITIES

**Quantitative Excellence**

- AMC AIME Qualifier (2023, 2024), ARML World Math Contest Top 100 Team (2023, 2024)

**Project Leadership**

**ProFarmer, Ban Ki-moon Centre Mentee**

- Directed an international conference on sustainable agriculture (Ban Ki-moon Centre Mentee), demonstrating complex project planning and execution across international stakeholders

**STEM Leadership**

**STEMX, Math Club**

- Founded first STEM competition team at WAB; mentored members and led team to win school's inaugural STEM competition

**Leadership Awards**

- EARCOS Global Citizenship Award(2024), WAB Principal's Award (2024&2025)