

KWANYOUNG PARK

Los Angeles, CA |

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: OepnSCAD, 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 Gobal Citizenship Award(2024), WAB Principal's Award (2024&2025)