

## curriculum vitae **Pyokyeong Son**

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### Educational Background *Secondary Education*

**O-SUNG  
MIDDLE SCHOOL** 7th – 9th grade; Daegu, Korea;  
Public Middle School Education

**SAINT MAUR  
INTERNATIONAL SCHOOL** 1st – 4th, 10th – 12th grade; Yokohama, Japan;  
IGCSE; International Baccalaureate Diploma Programme

### Extracurricular Activities *School-based*

**HS STUDENT COUNCIL,  
PRESIDENT** Elected High School Student Council President in Junior Year.  
Proposed and led participation in various activities including Shine  
On Kids, Monetary donations for books, International Anti-bullying  
Day (Pink Shirt Day), etc. Organized various school events including  
Socials and assemblies.

**HS ROBOTICS CLUB,  
VICE PRESIDENT** Participated in robotics club since second grade. In MS, used  
Arduino kits in making a concept “smart home,” awarded first place  
in the National Youth Science Club fair, and a special award in ISEF-  
Korea. In HS, led the VEX robotics team, coming in at 2nd place (at  
the international ASIJ competition) last year, and awarded a judge’s  
award.

**JV BASKETBALL,  
TEAM CAPTAIN** Participated in the KPASS basketball tournament in 2016 and 2017.  
Appointed team captain in Junior Year by teammates, awarded  
Most Improved Player both years.

**JAPANESE ANIMATION  
STUDIES CLUB** Participated in Japanese discussions and produced written analysis  
of contemporary Japanese anime series.

## Extracurricular Activities

*Extra-scholastic*

### **WOLFRAM SUMMER CAMP**

Participated in a 2-week intensive project-based computer science program at Wolfram Research. Completed a project using Mathematica to investigate the derivation of theorems using axioms, and formulating unconventional axiom systems. The project was labeled a Staff Pick and gathered fair attention from the Wolfram Community. Computational essay found [here](#).

### **SCIENCE IMMERSION PROGRAM**

Participated in a 3-day science immersion camp in collaboration with the Yokohama Science Frontier High School, with a investigative research project in collaboration with Japanese students. Detailed reflection found [here](#).

## Volunteer Experiences

### **TOKYO NATIONAL MUSEUM OF SCIENCE & INNOVATION**

Monthly participation in communication with visitors; event preparation; research presentation support.

### **HABITAT FOR HUMANITY, STUDENT VOLUNTEER**

Participation in Habitat for Humanity fundraising events and awareness campaigns; Trip to Siem Reap with support from Habitat for Humanity Cambodia, as volunteer worker.

### **AFTER-SCHOOL MATHEMATICS ACADEMIC SUPPORT TUTOR**

Volunteered to help in Mathematics Academic support session after-school, weekly.

## Awards & Distinctions

*\* KPASS: Kanto Pain Association of Secondary Schools  
Organization of international schools in the Kanto Area of Japan*

**2015**

### **Youth Science Club (YSC) Competition**

Grand Prize, award by the Ministry of Science, ICT, and Future Planning

### **Intel Int'l Science and Engineering Fair Korea (ISEF-K)**

Special Award from Korean Aerospace Research Institute

### **Daegu Educational Institute for the Gifted in Science**

**2016**

### **VEX Robotics Competition ASIJ**

Judge's Award (Finals)

### **KPASS Speech Contest**

Extemporaneous Speaking - Silver Award

## Awards & Distinctions *Continued*

- 2017**
- KPASS History Bee and Bowl**  
Team First Place
- KPASS Math Field Day**  
Senior Tech Challenge, Winner
- KPASS Brain Bowl**  
First Place (Team), All Stars Award (Individual)
- VEX Robotics Tournament ASIJ**  
Quarter-Finalist
- 2018**
- KPASS Speech Contest**  
Extemporaneous Speaking - Bronze Award
- KPASS Math Field Day**  
Math Skills Test, Junior, First Place

## Personal Projects

- COMPUTATIONAL MATHEMATICS** *Exploration of Fundamental Mathematics, via Implementation of Common Axiom Systems and Proof Generation (Wolfram Summer Camp)*
- JOURNALISM** *Manually developing and maintaining a [personal website](#) and [blog](#), writing about computer science or just casual thoughts.*
- CRYPTOGRAPHY** *The Mathematics of Deciphering the Enigma machine*
- MACHINE LEARNING** *Investigation of Common Optimization Algorithms for Machine Learning Applications*

## Knowledge & Skills

- COMPUTER SCIENCE** *Linux System Administration; C; Python (Numpy, Flask); PHP; Java (Swing); iOS (Swift); HTML & CSS; Mathematica (Wolfram Language)*
- CERTIFICATIONS** *iBT TOEFL : 119, IELTS: 8.5, JLPT N-1: Pass (175/180), AP: 5 in Comp. Sci., Microecon., English Lang., and Calculus AB*