# Junu Kwon

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## Education

Mar 2022–
Current
**Seoul National University**.
*College of Liberal Studies*.
GPA – 4.24/4.3

Mar 2019–
Feb 2022
**Gyeonggi Science High School**.
*Math, Science & Informatics*.
GPA – 4.0/4.3

## Experience

Jul 2022–
Current
**MLOps Engineer**, *FriendliAi, SNU*.
○ Kubernetes cluster orchestration for AI inference servers
○ Cloud Platform integration (AWS, GCP, Azure)
○ Unit, E2E tests (Python, FastAPI)
○ Issue, Bug tracking with Jira, Git & Slack

Feb 2022–
Jun 2022
**Software Developer**, *Bigteam Inc.*
○ Database management, Oracle SQL
○ eGovFramework developer (Java Spring)
○ Web server deployment via Jenkins
○ Software integration contract with *Seoul National University IST, 정보화본부*

May 2019–
Feb 2022
**Server Administrator**, *Gyeonggi Science High School*.
○ GPU server admin - managed CUDA, Python environments for research [Link]
○ Web server admin - managed [Link 1], [Link 2]
○ Deployed Contest Systems and OJs for school programming contests using GCP and Azure
○ Augmented sandbox and advanced evaluation system for KOISTUDY [Link]
○ Published Linux/Server manual and courses for beginners [Link]

Jul 2019–
Aug 2019
**Mentee**, *International Olympiad in Informatics Summer Camp(국제정보올림피아드 여름학교)*.
○ Organized by *Korean Institute of Information Scientists and Engineers*
○ C/C++ problem solving algorithm class

## Researches

Jan 2021–
Oct 2021
**Quant. and Pruning Methods for Compressing Obj. Detection Networks [Paper]**, *Grad. Thesis*.
○ Compressed two major object detection networks, YOLOv3 and FasterRCNN using PyTorch
○ Applied iterative compressing methodologies in order to maintain accuracy (5% for each iteration)
○ FasterRCNN: reduced to about 20% size while maintaining the original mAP, x13.1 speed
○ YOLOv3: reduced to about 25% size while maintaining the original mAP, x5.3 speed
○ Used school server with Google Cloud Platform (Nvidia V100)

Mar 2020–
Dec 2020
**Compressing YOLO via Quantization and Pruning [Code]**, *Assistant Prof. Jae-Pil Heo, SKKU*.
○ Integrated YOLOv3(Redmond et al.) using PyTorch
○ Compressed using quantization and pruning
○ Reduced about 38% size while maintaining 90% of the original mAP
○ Accelerated the calculation about 4.2 times
○ Recieved *Silver* medal at 16th Asia-Pacific Conference on Giftedness

Mar 2019–
Oct 2020
**3D Image Segmentation Program Using Quantization or BFS [Paper]**, *Self-motivated*.
○ Both Breadth-First-Search and Quantization methods for removing the plane from a scanned 3D Image
○ 3D Image Segmentation Program Using Quantization or BFS, Proceedings Conference on Korea Institute of Information and Communication Engineering 24(2), pp. 293-195, 2020.

## Projects

**Feb 2022– Data Portal System Integration**, *Bigteam Inc., SNU IST(정보화본부)*.
Jun 2022
- System Integration task for an open data portal
- eGovernment Framework(Java Spring) with Oracle database management
- User interface design for administrator website
- Cooperative task using Subversion and Redmine.

**Jan 2020– GSHS CSLAB [Link]**, *Self-motivated*, *Founder*.
Feb 2022
- Server Management Group of Gyeonggi Science High School
- Server Administration (Nvidia Tesla K40c gpus)
- Documentations for using servers [Link]

**Mar 2019– Contest Management System**, *Self-motivated*.
Oct 2018
- Wrote Documentations for the Contest Management System
- Made packages and install scripts for CSL [Link]

**Jul 2020– New Koistudy**, *Self-motivated*, *PM*.
Dec 2021
- Replacing or enhancing the old Koistudy website
- Lectured php/html lessons and wrote database queries

**May 2021– ServerTools [Link]**, *Self-motivated*.
Jun 2021
- JavaFX-based server resource monitor with SFTP and an embedded web browser
- Used for school server management

**Mar 2019– Translations & Documentations**, *Self-motivated*.
Ongoing
- Contest Management System translation & documentation [Link]
- VJ4 translation [Link]
- Hydro translation [Link]
- QingdaoU OJ translation [Link] [PR]

## Achievements

**May 2022 Presidential Science Scholarship**, *대통령과학장학금*.
- USD 50,000 equivalent

**Apr 2022 National Science & Technology Scholarship**, *이공계국가우수장학금*.
- Renounced due to the Presidential Science Scholarship

**Jul 2021 Korea Olympiad in Informatics, 2nd Round**, *Bronze*.
- Ranked 73 among 205 contestants(TOP 35.61%) in *2021년 한국정보올림피아드 2차대회 고등부*

**May 2021 Korea Olympiad in Informatics, 1st Round**, *Silver*.
- Ranked in the TOP 3.614% in *2021년 한국정보올림피아드 1차대회 고등부 전체응시자부문*

## Skills

Languages  Python, C/C++, Java, SQL
Frameworks  PyTorch, Tensorflow, CUDA
Web Server  Ubuntu, Nginx, Apache, Docker, GCP
Utilities  Anaconda, Jupyter Notebook, Git, SVN
English  New TEPS(474)

## Relevant Courses

GSHS  Linear Algebra(AP), Calculus(AP), Number Theory, Object-Oriented Programming(AP), Computer Programming, Informatics Project, Informatics Seminar, Algorithm

SNU  Core Computing: Thinking with Computers (A+, TOP-1 score), Computer Programming (A+, Ranked 13th out of 167 students), Introduction to Artificial Intelligence (A+), Calculus 1 (A+)