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
- 48th Fall Comprehensive Conference, *Korea Institute of information and Communication Engineering*

Projects

Feb 2022–Jun 2022 · **Data Portal System Integration**, *Bigteam Inc., SNU IST(정보화본부)*.
- 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–Feb 2022 · **GSHS CSLAB [Link]**, *Self-motivated*, *Founder*.
- Server Management Group of Gyeonggi Science High School
- Server Administration (Nvidia Tesla K40c gpus)
- Documentations for using servers [Link]

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

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

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

Mar 2019–Ongoing · **Translations & Documentations**, *Self-motivated*.
- 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 Scholarsihp

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

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

Jan 2020–Ongoing · **Codeforces**, *Master*.
- Rated 2266
- Educational Codeforces Round 81 (Rated for Div. 2)

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 (컴퓨팅 핵심), Calculus 1 (수학 1)