Résumé: Jeayoung Jeon

MLOps and Cloud-Native Engineer (Last modified at 2024-07-07)

SUMMARY

My name is Jeayoung Jeon [🇰🇷 전제영], and I'm a software engineer in South Korea.

Currently, I'm working at **MAXST** as an **MLOps**, **DevOps**, and **Cloud-Native Software Engineer**. I also specialize in:

- 💂 Developing **Digital Twin Platforms** using **Cloud-Native APIs** and **ML pipelines**.
- ☁️ Building **Hybrid Kubernetes Clusters** with **On-Premise** and **Public Cloud**.
- 👷 Creating **Team Services** to enhance productivity through **GitOps**, **ChatOps** and **MLOps**.
- 🧙 Identifying best practices to bridge **team culture** and **new technologies**.
- 🚀 Balancing **performance** and **cost reduction** optimally.

From my experience and achievements, I hope to have a good career. For more details, please visit my **career description** (https://jyje.live/profile/cd) or **CV** (https://jyje.live/profile/cv) .

✉️ : **jyjeon@outlook.com**

in : **LinkedIn: jyje** (https://www.linkedin.com/in/jyje)

🎓 : **Google Scholar: Jeayoung Jeon** (https://scholar.google.com/citations?user=gwCPQM8AAAAJ)

○ : **Github** (http://github.com/jyje)

⚡ : **StackShare** (https://stackshare.io/jyje/jyje-pro-stack)

Work 💼

Mar 2024 – *present*

Project Widearth: Digital Twin Platform with AR/VR at MAXST (https://maxst.com/en)

SUMMARY

Project Widearth (https://widearth.world) : Point-cloud-based spatial mapping platform for digital twins. I am responsible for the development of ML pipelines, APIs and Infrastructure:

- **ML Pipeline** Design ML data pipelines using Argo Workflows and Hera Python SDK.
- **API** Making endpoints for the ML pipeline inference based on Python FastAPI.
- **Infrastructure** Building hybrid clusters with AWS EKS and bare-metal Kubernetes to reduce costs but keep system reliabilities. Hybrid clusters can reduce public cloud costs by more than 50%.

Jan 2024 – *present*

MLOps Engineer at MAXST (https://maxst.com/en)

SUMMARY

Developed of on-premise clusters providing MLOps for Technology Division in MAXST.

- **AutoML** Making AutoML tuning hyperparameters with Katib and Argo Workflows without pre-build.
- **JupyterHub** Generating On-Demand JupyterNotebook to distribute resources for ML researchers.
- **Distributed ML** Developing distributed learning environments using Kubeflow Training Operator.

Jan 2023 – Dec 2023

DevOps Engineer at MAXST (https://maxst.com/en)

SUMMARY

Developed hybrid clusters providing DevOps for the Technology Division at MAXST.

- **CI/CD** Designing Slackbot providing GitOps: Bitbucket Pipeline, Argo Workflows and Argo CD.
- **Hybrid K8s** Combining AWS EKS and On-Premise Kubernetes clusters to reduce costs and improve reliability.
- **On-Premise** Building bare-metal Kubernetes clusters using IaC tools such as Ansible and Kubespray.

Skills 🔧

SUMMARY

Here are my skills and highlighted items are industry-ready.

MLOps & LLMOps :

`Kubeflow` `Data Pipeline` `AutoML Katib` `Training Operator` `JupyterHub` `PyTorch` `OpenCV` `Ollama` `RAG`

DevOps :

`Kubernetes` `Argo Workflows` `AWS EKS` `Kubespray` `IaC` `Terraform` `Ansible` `Grafana` `Karpenter`

GitOps :

`CI/CD` `Argo CD` `Bitbucket Pipelines` `GitHub Actions` `Kaniko` `Docker/Multi-stage` `Slackbot`

Application Development :

`Python/FastAPI` `Unit Testing` `.NET/WPF` `.NET/MAUI` `Unity`

Programming languages :

`Python` `Go` `C#` `C/C++` `MATLAB`

Tools :

`Visual Studio Code` `Visual Studio` `Jupyter Notebook` `MATLAB/Simulink`

OS and Hardware :

`Windows` `WSL2` `Ubuntu` `Alpine` `MacOS` `ARM64/Raspberry Pi` `AMD64/Bare Metal` `FPGA`

Jan 2021 – Dec 2022

Computer Vison Engineer at MAXST (https://maxst.com/en)

SUMMARY

Developing computer vision algorithms for AR/VR and Digital Twin Systems.

- Visual-SLAM Research for Digital Twin Systems
- Developing ICP Algorithm to Align 3D Point Clouds

Jan 2012 – Aug 2020

Student Researcher with Integrated Program at POSTECH (https://eee.postech.ac.kr/)

SUMMARY

Studying and researching in the field of digital signal processing and computer vision. During my time as a graduate student at POSTECH, I had the privilege of working in several projects:

- **2018 - 2020** **Computing and Control Engineering Lab. (Prof. SH, Han)**
  - Thesis: Virtual Visual-SLAM for Real-World Environments (https://postech-primo.hosted.exlibrisgroup.com/permalink/f/1031dvf/82POSTECH_INST21232402040003286)
  - Visual-SLAM for Multiple Cameras

- **2012 - 2018** **Advanced Signal Processing Lab. (Prod. H, Jeong)**
  - Stereo Vision Algorithms for Image Depth Estimation
  - Advanced Driver Assistance Systems' Research and Development
    - Automotive Online Calibration in Stereo Vision
    - Real-Time Advanced Driver Assistance Systems using FPGA
    - Research on Traffic Sign & Lane Terrain Detection
      - Conference: Polygonal symmetry transform for detecting rectangular traffic signs (https://ieeexplore.ieee.org/abstract/document/6987934)

Education & Experience 🏛

Mar 2012 – Aug 2020

Master's Degree (Integrated Program) in Department of Electrical Engineering, Signal Processing & Computer Vision from Pohang University of Science and Technology (POSTECH) with GPA of 3.2/4.3

- Advanced Driver Assistance Systems (ADAS)
- Simultaneous Localization and Mapping (SLAM)
- Computer Vision Algorithms

Mar 2008 – Feb 2012

Bachelor's Degree in School of Electronic Engineering, Electronic Communication from Kumoh National Institute of Technology (kit) with GPA of 4.3/4.5

- Digital Signal Processing
- Visual Light Communication
- Electronic Communication with Complex Analysis
- Finite Programmable Gate Array (FPGA)

Certifications ✓

Jun 2024 (Expired in Jun 2026)

CKAD: Certified Kubernetes Application Developer (https://www.credly.com/badges/9e072a3a-57d0-403e-8bef-5831d618675c) **from The Linux Foundation**

Mar 2024 (Expired in Mar 2027)

CKA: Certified Kubernetes Administrator (https://www.credly.com/badges/d944bde7-222a-4ce5-b4e6-4e6c84df0ef8) **from The Linux Foundation**