Résumé: Jeayoung Jeon

MLOps and Cloud-Native Engineer (Last modified at 2024-07-12)

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 **Argo Workflows**.
- 💂 Leveraging background in **Computer Vision, Automotives, and ML** to design DevOps and workloads aligned with business objectives.

I'm trying to identify the best practices to bridge **team culture** and **new technologies**. And also, I'm balancing **performance** and **cost reduction** optimally. From my experience and achievements, I hope to have a good career. For more details, please visit my **portfolio** (https://jyje.live) .

✉ : **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)

Projects

Jan 2024 – Jul 2024 (7 Months)

Widearth: Digital Twin Platform with Spatial Map & AR Contents at MAXST

(https://maxst.com/ENG/main)

Results: Build Rubost Hybrid Infra and ML Pipelines [contrib 70%+]

- **Infra.** Achieved **'97% availability/year and 50% costdown'** for workloads of the hybrid cluster
- **ML Pipeline/API** Designed **cloud-native ML pipelines and APIs** for pipeline lifecycle

Roles: Development of ML pipelines, APIs and Infrastructure

- Infra. Hybrid infrastructure for high availability and cost optimization (97% availability/year, 50% cost down). Building hybrid clusters with AWS EKS and bare-metal Kubernetes.
- ML Pipeline Design ML data pipelines using Argo Workflows. ML Pipeline design and API implementation for pipeline lifecycle.
- API Making cloud-native APIs endpoints for the ML pipeline inference with based on Python FastAPI.
- DevOps Providing CI/CD pipelines with Bitbucket Pipelines and supporting app modernization with dockerizing for cloud-native applications.

Skills: Core skills for MLOps/DevOps

AWS EKS | Karpenter | Python FastAPI | Argo Workflows | Argo CD

Jan 2024 – Apr 2024 (4 Months)

On-Premise MLOps Setup with AutoML and Data Pipeline Hub at MAXST

(https://maxst.com/ENG/main)

Results: Maximized GPU Utilization for AI Research with AutoML [contrib 90%+]

- **Katib AutoML** Making hyperparameter tuning automation for 800+ experiments
- **JupyterHub** Generating On-Demand JupyterNotebook to distribute resources for ML researchers.
- **Data Pipeline** Providing a hub of build-free data pipelines using Argo Workflows

Roles

- 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.

Skills: Core skills for MLOps

Kubeflow | Katib AutoML | Argo Workflows | Grafana | Prometheus

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 2023 – Dec 2023 (12 Months)

On-Premise CI/CD and Chatbot Development/Delivery at MAXST (https://maxst.com/ENG/main)

Results: Developed Hybrid Clusters for DevOps [contrib 70%+]

- **CI/CD** Designing Slackbot providing GitOps: Bitbucket Pipeline, Argo Workflows and Argo CD.
- **ChatOps** Python Slackbot managine lifecycle of CI/CD profiles and pipelines. (50%)
- **On-Premise** Building bare-metal Kubernetes clusters using IaC tools such as Ansible and Kubespray.
- **DevOps Culture** Corvering demand from the team, Developing

Roles: Development of CI/CD Pipelines and Chatbot

- 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: Core skills for On-Premise DevOps

Kubernetes | Argo Workflows | AWS EKS | IaC | Terraform

Jan 2021 – Dec 2022 (2 Years)

Computer Vison Research in Lab. at MAXST (https://maxst.com/ENG/main)

Results: Developed Visual-SLAM for Digital Twin Systems [contrib 10%+]

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

Jan 2012 – Aug 2020 (8 Years)

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

Results: Studying on Automotive Simulations in Virtual Environments and ADAS On-Edge.

- **VVSLAM** Thesis: Virtual Visual-SLAM for Real-World Environments (https://postech-primo.hosted.exlibrisgroup.com/permalink/f/1031dvf/82POSTECH_INST2123240204003286)
- **Edge ADAS** Research of ADAS including Traffic Sign Detection & Lane Terrain Detection with FPGA

Roles: Studying and researching in the field of digital signal processing and computer vision

- 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)
- 2012 - 2018 Advanced Signal Processing Lab. (Prod. H, Jeong)
  - Real-Time Advanced Driver Assistance Systems using FPGA
  - Research on Traffic Sign & Lane Terrain Detection
    - Conference: Polygonal symmetry transform for detecting rectangular traffic signs (IEEE ICASS 2014) (https://ieeexplore.ieee.org/abstract/document/6987934)

Work

Mar 2024 – *present*

Senior Software Engineer [🇰🇷 책임연구원] at MAXST (https://maxst.com/ENG/main)

Roles: Developed On-Premise Clusters Providing MLOps for Technology Division in MAXST

- MLOps Developing on-premise clusters providing MLOps for the AI team.
- DevOps Building hybrid clusters with AWS EKS and bare-metal Kubernetes.
- Hybrid Building on-premise clusters with IaC tools such as Ansible and Kubespray.

Interests

IoT :

Raspberry Pi

Languages

Korean : Native

English : Working Proficiency

Jan 2021 – Feb 2024 (3 Years)

Software Engineer [🇰🇷 선임연구원] at MAXST (https://maxst.com/ENG/main)

Roles: Associate R&D Engineer for Technology Division in MAXST

- Algorithm Research Reviewing computer vision algorithms in state-of-art papers and implementing prototypes.
- DevOps Building hybrid clusters and providing data pipelines for digital twins.
- Technical Research Personnel Serving as a substitute for military service for 3 years, engaging in the industry in the related field of computer vision major.

Skills

Kubernetes | On-Premise | AWS | Argo Workflows | Data Pipeline | CI/CD | Computer Vision | OpenCV

Education

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

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

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