Harim Kang

harimkang4422@gmail.com | (+82) 10.2924.4422 | Github | linkedIn

PROFILE

Experienced AI Software Engineer specializing in deep learning frameworks and user-centric API design.

With a solid foundation in engineering and a focus on continuous improvement, I optimized user accessibility and functionality in ML frameworks through streamlined APIs and robust feature enhancements. Known for impactful research in semi-supervised and class-incremental learning, I have made strategic contributions to open-source AI projects as part of high-performance teams.

EMPLOYMENT HISTORY

AI Software Engineer (OpenVINO Dev Tools)

Seoul, Korea | JUN. 2021 – Nov. 2024 | 3 years 6 months

Full-Time

- **Productized OpenVINO™ Training Extensions (OTX) into a low-code framework, amassing 1.1k+ GitHub stars.**
- **Proposed and architected a new user-centric design for OTX v2.0, enhancing scalability and API compatibility.**
- **Led the development group for OTX v2.0, overseeing project execution, coordinating team efforts, and ensuring delivery of user-focused improvements.**
- **Conducted diverse research and implementation of classification and semi-supervised learning (Semi-SL) to optimize performance in low-data environments.**
- **Supported Intel® Geti™ as a backend engineer, managing training workflows, SDK integration, and user support.**
- **Contributed to Anomalib, optimizing CLI output and enabling installation for edge devices.**

Software Engineer (contract worker)

Seoul, Korea | MAY. 2020 – May. 2021 | 1 years

- **As part of the Validation team, validated a deep learning framework, AVAS (Adaptive Video Analytics Suite), to ensure system robustness and accuracy.**
- **Planned, authored, and executed integration and end-to-end tests for Python micro-services APIs.**
- **Contributed to the development of an entropy-based sampler feature in Intel's open-source dataset management framework, Datumaro.**

EDUCATION

Soongsil University | B.S., Mathematics & Software

Seoul, Korea | Mar. 2014 – Aug. 2020

- **Researched designing for intelligent systems as research students of software engineering Lab | Dec.2018 - May.2019**
- **Nominated student for Global Startup Challenge Program | 2019**

PROJECTS

OpenVINO™ Training Extensions | github

2022 - 2024

- **OpenVINO™ Training Extensions is a low-code transfer learning framework for Computer Vision that provides an end-to-end workflow from training to deployment of OpenVINO Model. Contributed to reaching 1.1k+ stars as the #1 main contributor for that repo.**
- **In v1.0, contributed as a team member by implementing and developing overall CLI and automation, while serving as the person responsible for classification.**
- **Proposed a new design in v2.0 that prioritized user-friendliness, scalability to enhance the framework's adaptability and usability.**
- **Led the development team for the v2.0 release, guiding new architectural decisions to elevate user experience and functionality.**
- **Contributed to OTX, enabling seamless and unified API and CLI usage of models from various frameworks, including torchvision and Hugging Face.**
- **Enhanced Semi-Supervised Learning (Semi-SL) with techniques like pseudo-labeling, adaptable thresholds, and unlabeled warm-up loss. These methods improved accuracy by 5-20% compared to supervised learning, with training times averaging up to 3x longer.**
- **Researched class-incremental learning algorithms for computer vision tasks, demonstrating performance improvements with incremental case.**

Intel® Geti™ | site

2022 - 2024

- **Intel's software for building computer vision models in a fraction of the time and with less data. This software eases laborious data labeling, model training and optimization tasks across the AI model development process, empowering teams to produce custom AI models at scale.**
- **Maintained the training workflow for Intel® Geti™ product, which leverages OpenVINO Training Extensions as its backend.**
- **Enhanced model performance for low-data and active learning scenarios, responded to user inquiries on training and model performance issues, and supported the implementation of the Geti-SDK.**

Anomalib | github

2023 - 2024

- **Anomalib is a deep learning library that aggregates state-of-the-art anomaly detection algorithms for benchmarking on both public and private datasets, contributing to reaching 3.8k GitHub stars.**
- **Proposed and implemented a 2-step installation for edge device environments, optimizing the installation experience for specific features in constrained settings.**
- **Optimized the CLI output to provide a simplified guide for lightweight users and refactored it so that all configurable parameters are visible for expert users.**
- **Propose a new API to provide features to enable a continuous workflow between the API and CLI.**

SKILLS & TOOLS

- **Python | PyTorch | OpenVINO | Git | Github | PyTest | Tox | MOS Master Certificate | Linux Environment**
- **Software development | Scalable Software Architecture| Open-source | User-centric API & CLI | Scrum Process**
- **Machine Learning | Deep Learning | Computer Vision | Image Classification | Semi & Weakly Supervised Learning | Transfer & Incremental Learning**
- **Korean: Native | English: Business working proficiency**