RESUME

Chanhee Lee

4328 Scorpius St, Orlando, FL 32816, United States
chanhee26.lee@gmail.com | (+1) 602-451-5792 | LinkedIn | GitHub

RESEARCH INTERESTS

- **CXL-based memory systems, AI/ML systems and software platforms, on-device and edge LLMs, and efficient LLM inference.**

SUMMARY

- **AI systems and software platform engineer with 9+ years at Samsung Research and recent postdoctoral work on CXL-based memory systems and on-device LLMs.**
- **Designed production AI inference platforms for Android/TVs and distributed software frameworks for IoT.**
- **Interested in LLM systems engineering, ML infrastructure, and distributed inference platforms.**

PROFESSIONAL EXPERIENCE

- **University of Central Florida**, Orlando, FL, United States
  Postdoctoral Researcher, Department of Computer Science **Dec. 2024 - Present**
  • Designed memory-efficient LLM inference for CXL memory systems (Gem5 simulation).
  • Extended Linux kernel for fault-tolerant non-volatile memory (NVM) in real-time edge systems [linux_pmo].
  • Lead 3–5 students optimizing llama.cpp on NVIDIA Jetson (latency/memory).

- **Arizona State University**, Tempe, AZ, United States
  Visiting Scholar (Voluntary), School of Computing and Augmented Intelligence **Jan. 2024 - Dec. 2024**
  • Led on-device LLM personalization (Android + knowledge graphs) [EMSOFT WIP 2024] [WWW Short 2025].
  • Built Rust reactive engine in Lingua Franca (CAP-theorem guarantees) [lf-rust-rti].

- **Samsung Electronics Inc.**, Seoul, Republic of Korea
  Staff Engineer/Best Reviewer, Platform Team, Samsung Research **Aug. 2014 - Dec. 2024**
  • Led platform team demo at Samsung Research annual showcase (**Top 3/10 major divisions**, ~2K researchers), GPU/NPU inference + SmartTrainer TV app
  • Led SmartFS filesystem development (fixed power-cut crashes for Samsung home appliance production boards).
  • Ported Oxigraph graph DB REST APIs to Android for edge AI workloads.
  • Led OCF IoTivity D2D framework for ARTIK production boards (1st author, Springer LNCS ICIoT 2018) [RT-OCF]
  • Developed audio manager/streaming APIs for Samsung ARTIK IoT boards.

EDUCATION

- **Ph.D.** Electrical Engineering & Computer Science, Seoul National University 2014
- **M.S.** Computer Science, KAIST 2009 | **B.S.** Computer Science, KAIST 2007

SKILLS

- **Languages:** Rust, C/C++, Python, Java, SystemC
- **AI/ML:** PyTorch/TensorFlow, gRPC, LLM inference, on-device ML, performance optimization
- **Platforms:** CXL/Gem5, Linux kernel, Docker, CI/CD, Test-driven development, reactive systems, embedded systems

PUBLICATIONS

- **8 conference** papers (EMSOFT, WWW) + **2 journal** papers (JSPS, TECS) | 250+ citations [Google Scholar]

AWARDS & LEADERSHIP

- **UCF Preeminent Postdoc Fellow (2025-27), Samsung Ph.D. Scholarship (2013)**
- **Invited Talk:** "Remote inference with IoT" (Hanyang Univ., 2023)
- **Reviewer:** ISCA/ASPLOS/HPCA/PPoPP/LCTES (2025), **ACM Member**