Sungmann Cho

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OBJECTIVE

- ❑ Cross-Platform Applications Engineer
- ❑ Libraries Engineer
- ❑ Software Development Kits Engineer

SKILLS

- ❑ **Languages**: C, C++, Java, Python, Rust
- ❑ **Open Sources**: Chromium, Pixel Streaming, Skia, WebKit
- ❑ **Platforms**: Android with NDK/PDK/SDK, Windows with SDK/WTL
- ❑ **Toolchains**: Autotools, CMake, Emscripten, GN
- ❑ **Toolkits**: Flutter, Qt

EXPERIENCE

- ❑ **HYBE IM[1]**   **DECEMBER 2024—PRESENT**

    DRIMAGE SYNC: A WEBRTC-BASED REMOTE PLAY SERVICE
    • Designed and developed the entire application using Flutter.
    • Built the initial service leveraging Pixel Streaming Infrastructure.

- ❑ **NCSOFT**   **SEPTEMBER 2022—NOVEMBER 2024**

    NC CRASH REPORTER SDK 2: A SENTRY.IO-LIKE CRASH REPORTER SDK FOR IN-HOUSE GAMES
    • Designed and developed the entire SDK using Rust, along with a testbed application to demonstrate and test its features using Flutter.
    • Added support for five operating systems (Android, iOS, Linux, macOS, Windows), two game engines (Unity, Unreal Engine), and three languages (C++, Kotlin, Swift) using Autocxx and UniFFIs.
    • Built a continuous integration and delivery pipeline using GitHub Actions.

    FACEWARE BATCHER: A FACEWARE-BASED BATCH PROCESSING APPLICATION FOR FACIAL MOTION CAPTURE IN IN-HOUSE GAMES

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[1] Changed to DRIMAGE in 2025

• Designed and developed the entire application using Flutter.
• Wrote a MEL script for retargeting in Python.

FOSS: A [OPEN SOURCE INSIGHTS](#)-LIKE OPEN SOURCE COMPLIANCE SERVICE FOR IN-HOUSE SERVICES
• Designed and developed the entire service including a dedicated CLI tool, GitHub App, and website using Node.js, React, and Rust.

❑ **[VOYAGERX](#)**   **SEPTEMBER 2021—JULY 2022**

VREW: A [DESCRIPT](#)-LIKE AI-ASSISTED VIDEO EDITOR
• Designed and developed a minimum viable product of Ultra Captions, a broadcast-quality dynamic captions and effects feature, using FFmpeg, Lottie, and Puppeteer.
• Designed and developed a cross-platform CLI tool to manage fonts installed on the operating system using Rust.
• Fixed various bugs related to subtitle rendering using FFmpeg and `libass`.

❑ **[NAVER](#)**   **DECEMBER 2011—AUGUST 2021**

TITAN DATASETS: A [KAGGLE DATASETS](#)-LIKE DATASETS SERVICE FOR NAVER WEBTOON
• Designed and developed a minimum viable product using Spring Boot and Vue.js.
• Performed various prototyping tasks.

CLOVA SEE: A REAL-TIME DEEP LEARNING-BASED COMPUTER VISION SDK
• Designed the overall architecture.
• Developed the entire SDK along with testbed applications to demonstrate and test its features using Boost, NCNN, and OpenCV, excluding the deep learning models and their pre- and post-processing layers.
• Added support for five operating systems (Android, iOS, Linux, macOS, Windows) and three languages (JavaScript, Kotlin, Python) using Emscripten, Java Native Interface, and Pybind11.
• Built a continuous integration and delivery pipeline using Jenkins.
• Deployed in various products and services including CLOVA FaceSign, LINE Pay, and NAVER LABS ARC.
• Obtained the K-NBTC certification (BSC 20-008).

NAVER LABS AWAY: AN AI-ASSISTED IN-VEHICLE INFORTAINMENT PLATFORM
• Maintained various features of the main carousel screen on Android using Java.
• Integrated with various NAVER services including AudioClip, Booking, Calendar, CLOVA, Sports, and Vibe.

[NAVER WHALE](#): A CHROMIUM-BASED WEB BROWSER
• Designed and developed various features including [Block Intrusive Ads](#), [Capture](#), [Mobile Window](#), and [Skin](#) using Chromium.

• Fixed various bugs in Chromium:
https://github.com/chromium/chromium/commits/master?author=sungmann.cho@navercorp.com

JACKBEAN: A WEBKIT2-BASED WEB BROWSER FOR INTERNAL RESEARCH
• Designed the overall architecture.
• Developed various features including a popup blocker, browser windows, common UIs, and infobars using Qt.
• Developed various facilities including color and image operations, special purpose RAII classes, and STL extensions using C++.

SLING: NAVER'S OWN PORT OF WEBKIT2
• Designed and developed the WebView embedder framework and its APIs using WebKit2.
• Maintained various WebKit2 features using NAVER's own cross-platform solution.
• Ported `PluginProcess` to support Netscape Plugins (NPAPI) on Windows.
• Ported WebKit2 IME facilities on Android.
• Fixed various bugs in WebKit2:
https://github.com/search?q=repo:WebKit/WebKit+sungmann.cho@navercorp.com&type=commits

NAVER WEB ENGINE: A CHROMIUM-BASED ALTERNATIVE TO ANDROID WEBVIEW
• Designed the overall architecture.
• Developed the WebView embedder framework and its APIs using Chromium.
• Deployed in various services including NAVER Apps and LINE Play.

HIGGS: AN EXPERIMENTAL ANDROID WEB BROWSER
• Designed and developed the entire application based on Android Stock Browser using Java.
• Fixed various bugs in Android Stock Browser:
https://android-review.googlesource.com/q/sungmann.cho@navercorp.com

❑ **DAUM COMMUNICATIONS[2]**   **FEBRUARY 2010—SEPTEMBER 2011**

MY PEOPLE: YET ANOTHER SOCIAL MESSAGING APP
• Developed and maintained the almost features on Android including chats, contacts, geolocation sharing, media sharing, photos, push notifications, themes, and voice memos using Java.

❑ **INFRAWARE[3]**   **JANUARY 2009—JANUARY 2010**

POLARIS 7 FOR ANDROID: A WEBKIT-BASED ANDROID WEB BROWSER

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[2] Acquired by Kakao in 2014
[3] Changed to Polaris Office in 2021

• Researched the `Surface`-based rendering on the native side for high performance browsing.

POLARIS 7: A WEBKIT-BASED NON-SMARTPHONES WEB BROWSER
• Designed and developed the Safari-like magnifier for easy IME operations using C++.
• Designed and developed some hardware accelerated effects for rotation, zoom-in, and zoom-out using C++ and OpenGL ES.
• Researched the Skia-based backend for `WebCore::GraphicsContext2D` and the memory efficient chinese font glyph caching strategies for FreeType.

EDUCATION

❑ **Bachelor Science of Computer Science**
Dankook University, Gyeonggi-do, Korea

HONORS AND AWARDS

❑ **Top 10 Best Technologies, N Innovation Award 2020**
NAVER

❑ **Encouragement Award, Open Source Software Challenge 2008**
Ministry of Science, ICT and Future Planning

PUBLICATIONS

❑ **Building a Debugger** Write a Native x64 Debugger from Scratch
Authors: Sy Brand
Publisher: Jpub
Date: March 1, 2026

❑ 커맨드라인 러스트 cat, grep, ls 등 14가지 유용한 CLI 도구를 클론 코딩하며 배우는 러스트 활용
Authors: Ken Youens-Clark
Publisher: Jpub
Date: August 5, 2024

❑ 프로그래밍 러스트, 개정2판 빠르고 안전한 시스템 개발
Authors: Jason Orendorff, Jim Blandy, Leonora Tindall
Publisher: Jpub
Date: January 16, 2023

❑ 레일스와 함께하는 애자일 웹 개발, 개정판
Authors: Dave Thomas, David Heinemeier Hansson, Sam Ruby
Publisher: Insight
Date: May 29, 2012

- 프로페셔널 안드로이드 **2** 애플리케이션 개발**, 2**판
  Authors: Reto Meier
  Publisher: Jpub
  Date: September 17, 2010

- 프로페셔널 안드로이드 애플리케이션 개발
  Authors: Reto Meier
  Publisher: Jpub
  Date: July 24, 2009

- **Qt 4**를 이용한 **C++ GUI** 프로그래밍**, 2**판
  Authors: Jasmin Blanchette, Mark Summerfield
  Publisher: ITC
  Date: March 17, 2009