**Sungmann Cho**

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<https://github.com/chosungmann>

# OBJECTIVE

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

# SKILLS

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

# EXPERIENCE

* [**NCSOFT**](https://www.ncsoft.com/) **SEPTEMBER 2022—PRESENT**

**NC CRASH REPORTER SDK 2: A** [**SENTRY.IO**](https://sentry.io/)**-LIKE CRASH REPORTER SDK FOR IN-HOUSE GAMES [WORK IN PROGRESS]**

• 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**](https://facewaretech.com/)**-BASED BATCH PROCESSING APPLICATION FOR FACIAL MOTION CAPTURE IN IN-HOUSE GAMES**

• Designed and developed the entire application using Flutter.

• Wrote a MEL script for retargeting in Python.

**FOSS: A** [**OPEN SOURCE INSIGHTS**](https://deps.dev/)**-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**](https://www.voyagerx.com/) **SEPTEMBER 2021—JULY 2022**

**VREW: A** [**DESCRIPT**](https://www.descript.com/)**-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**](https://www.navercorp.com/) **DECEMBER 2011—AUGUST 2021**

**TITAN DATASETS: A** [**KAGGLE DATASETS**](https://www.kaggle.com/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**](https://whale.naver.com/)**: A CHROMIUM-BASED WEB BROWSER**

• Designed and developed various features including [Block Intrusive Ads](https://help.whale.naver.com/en/desktop/adblock/), [Capture](https://help.whale.naver.com/en/desktop/capture/), [Mobile Window](https://help.whale.naver.com/en/desktop/mobilewindow/), and [Skin](https://help.whale.naver.com/en/desktop/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**](https://github.com/naver/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[[1]](#footnote-0) 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[[2]](#footnote-1) JANUARY 2009—JANUARY 2010**

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

• 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

* [**커맨드라인 러스트 cat, grep, ls 등 14가지 유용한 CLI 도구를 클론 코딩하며 배우는 러스트 활용**](https://product.kyobobook.co.kr/detail/S000213800078)

**Authors**: Ken Youens-Clark

**Publisher**: Jpub

**Date**: August 5, 2024

* [**프로그래밍 러스트, 개정2판 빠르고 안전한 시스템 개발**](https://product.kyobobook.co.kr/detail/S000200629958)

**Authors**: Jason Orendorff, Jim Blandy, Leonora Tindall

**Publisher**: Jpub

**Date**: January 16, 2023

* [**레일스와 함께하는 애자일 웹 개발, 개정판**](https://product.kyobobook.co.kr/detail/S000001032934)

**Authors**: Dave Thomas, David Heinemeier Hansson, Sam Ruby

**Publisher**: Insight

**Date**: May 29, 2012

* [**프로페셔널 안드로이드 2 애플리케이션 개발, 2판**](https://product.kyobobook.co.kr/detail/S000001550628)

**Authors**: Reto Meier

**Publisher**: Jpub

**Date**: September 17, 2010

* [**프로페셔널 안드로이드 애플리케이션 개발**](https://product.kyobobook.co.kr/detail/S000001592603)

**Authors**: Reto Meier

**Publisher**: Jpub

**Date**: July 24, 2009

* [**Qt 4를 이용한 C++ GUI 프로그래밍, 2판**](https://product.kyobobook.co.kr/detail/S000000987733)

**Authors**: Jasmin Blanchette, Mark Summerfield

**Publisher**: ITC

**Date**: March 17, 2009

1. Acquired by [Kakao](https://www.kakaocorp.com/) in 2014 [↑](#footnote-ref-0)
2. Changed to [Polaris Office](https://www.polarisoffice.com/) in 2021 [↑](#footnote-ref-1)