

CAREER

NGINE STUDIOS (NEXON COMPANY, Jul 2020 – Nov 2022)

- **Software Engineer / Military Service Specialist** (Jul 2020 – Jun 2022)
- **Research Department** (Jul 2021 – Nov 2022)
 - MapleStory sentence distortion algorithm development
 - Developed an algorithm in Python for the "Find the Correct Sentence!" in the game *MapleStory*
 - Developed an algorithm to generate distorted sentences based on varying degrees of distortion from a correct sentence
 - KartRider highlight extraction
 - Developed a project in Python to extract highlight segments between two players in *KartRider*
 - Designed and implemented an algorithm to identify driving segments where the "actor" outperformed the "highlighter" based on driving coordinate data in a ksv file
 - Developed a program to recombine extracted highlights into a new ksv file
 - New word detection
 - Developed an algorithm in Python to detect neologisms not present in the corpus using NLP
 - Applied statistical methodologies and the SA-IS algorithm to detect new words using the Sejong Corpus
 - Conducted code maintenance and documentation
 - YouTube game classification
 - Developed a project in Python using NLP to classify YouTube videos by corresponding games
 - Utilized the Naïve Bayes theorem and word pair concepts to achieve approx. 90% accuracy
 - Developed a web page to display video classification results and conducted code maintenance
- **Advertising Department** (Oct 2020 – Jun 2021)
 - Managed web pages using React, TypeScript, and Material-UI
 - Managed servers and performed feature updates using JS and TS
- **Intern** (Jul 2020 – Oct 2020)
 - Reviewed problems for the 2020 NYPC preliminary round
 - Developed a Slack bot (Lunch Alert Bot) using JS for internal use

Seoul National University Hospital Biomedical Research Institute (Mar 2019 – Nov 2019)

- **Research Intern**, Division of Clinical Bioinformatics under Prof. Kwangsoo Kim
 - Participated in national research projects in the field of bioinformatics and cancer genetics under Prof. Kye Hwa Lee (Precision Medicine Center)
 - Identification of synthetic chemosensitivity genes paired with *BRAF* for BRAF/MAPK inhibitors
 - Co-authored a paper as first author, published at *Scientific Reports* (Nature Research journals, DOI: [10.1038/s41598-020-76909-2](https://doi.org/10.1038/s41598-020-76909-2))
 - Conducted statistical analysis and data visualization using R and Python on a Linux server
 - Identification of synthetic cytotoxic gene pairs associated with a therapeutic response for the anticancer drug etoposide based on cell line-drug database
 - Presented the abstract as a poster presenter at the 2019 ASHG Annual Meeting in Houston

SK Hynix Academic Exchange Internship (Dec 2018 – Feb 2019)

- **Intern**, DRAM Etch 1 Team, Future Technology Research Institute
 - Improvement of SNC HM ACL Upper Layer Clogging Using Design of Experiments (DOE)
 - Analyzed the effects of three factors—pressure, bias, and chemicals—on clogging
 - Applied and optimized the Design of Experiments methodology using JMP
 - Awarded the Vice President's Award from SK Hynix Future Technology Research Institute
 - Successfully admitted as a scholarship student through a special selection process for academic exchange interns

EDUCATION

Pohang University of Science and Technology (POSTECH, Feb 2016 – Feb 2025 (expected))

- Bachelor of Science in Chemical Engineering, Double Major in Computer Science and Engineering
- **GPA:** 3.77 / 4.3 (Completed 9 semesters, 173 credits + 7 units)

Gyeonggi Science High School for the Gifted (Mar 2013 – Feb 2016)

- **GPA:** 3.65 / 4.3

EXPERIENCE

POSTECH Machine Learning Lab Research Participation (Mar 2024 – Present)

- Post-hoc Concept Probing of an End-to-end RL Model: Extracting an Opponent Hand Estimator from Mahjong AI
 - Advisor: Prof. Jungseul Ok / Research Outcome for Project Study I
 - Successfully extracted specific concepts embedded within a black-box end-to-end RL model
 - Analyzed the structure of the Mahjong AI and applied concept probing techniques, making the model more interpretable

POSTECH Software Design Methods Team Project (Nov 2023 – Dec 2023)

- "Code Scent", Customizable Code Smell Detection Plugin for IntelliJ IDEA
 - Worked in a team using eXtreme Programming methodology to develop a plugin for IntelliJ IDEA
 - Established custom coding conventions and git logging & branching conventions for development
 - Developed features for detecting and visualizing code smells, with customizable detection criteria
 - Took responsibility for developing the plugin's GUI and implementing the customization of code smell detection criteria

SKILL & HONOR

- **Problem Solving:** [LeetCode](#) (eric970901), [BOJ](#) (eric9709, [solved.ac](#)), [KOISTUDY](#) (gs13008)
- **Competitive Programming:** 2022 Woori Coding Festival (Special Prize, Python), Google Hash Code 2020 (1229th place, Online Qualification Round), [Codeforces](#) (JEMINI), [AtCoder](#) (JEMINI), [Topcoder](#) (JEMINI)
- **Programming Languages & Frameworks:** Python, C++, C, Java, JS, TS, HTML, CSS, R, React, Material-UI
- **Other Skills:** Linux, Git, Jupyter notebook, Machine Learning
- **Languages:** Korean (Native), English (Advanced, TOEIC 830), Japanese (Intermediate, JLPT N3)
- **Scholarship:** SK Hynix Industry-Academia Scholarship (2019), National Science & Engineering Scholarship (2018 – 2023), Boeing Scholarship (2017), Full Tuition Scholarship (2016 – 2023)