

Rizky Johan Saputra
Seoul, South Korea
Computer Science and Engineering
Seoul National University, South Korea

[rizkysaputradev.github.io](https://github.com/rizkysaputradev)
flamablesrizky@gmail.com
github.com/rizkysaputradev
[linkedin.com/in/rizky-johan-saputra](https://www.linkedin.com/in/rizky-johan-saputra)

EDUCATION

- **Seoul National University, South Korea** *Mar. 2021 - Feb. 2026*
B.S. in Computer Science and Engineering, Seoul
- **Stella Maris International School, Indonesia** *Jul. 2017 - Jun. 2020*
International Baccalaureate Diploma Programme (Pre-IB and IBDP), Tangerang

EXPERIENCE

- **SNU International Student Association** *Mar. 2024 - Aug. 2024*
IT and Design Executive Member Seoul, South Korea
 - Maintained and enhanced the official SISA website used by international students at SNU, ensuring reliable delivery of campus and event information across more than 1000 students.
 - Resolved website and SNS technical issues, improving operational stability during student events and activities.
 - Provided on-site hardware and software troubleshooting, reducing downtime during student-led activities.
- **EMC Healthcare Indonesia** *Sep. 2019 - Dec. 2019*
Software Development Intern Jakarta, Indonesia
 - Contributed to the development of a prototype automated medicine queue system aimed at reducing patient wait times by 40% its initial duration across 3 hospital departments.
 - Managed and curated large-scale medical and inventory datasets, specifically up to around 100,000 records, supporting real-time data access for internal stakeholders by 15%.
 - Collaborated with engineers to test and validate system workflows using real-world healthcare data.

NOTABLE PERSONAL PROJECTS

- **Facial Emotion Recognition (FER) Based Burnout Detection System**  *Sep. 2025*
Undergraduate Thesis, Seoul National University
 - Designed and implemented a real-time burnout detection system using CNN-based facial emotion recognition with LSTM temporal modeling.
 - Processed live video streams with OpenCV and trained deep learning models using TensorFlow/Keras for emotion classification over time.
 - Integrated NLP-based survey analysis using HuggingFace models to correlate self-reported burnout scores with detected facial emotion trends.
 - Evaluated model performance across multi-session data to analyze longitudinal burnout patterns.
- **SyntraLine++ Compiler**  *May. 2025*
Domain-Specific Language and Compiler Implementation
 - Designed and implemented a custom programming language compiler with lexical analysis, parsing, and semantic validation stages.
 - Built an abstract syntax tree (AST) and implemented syntax / type checking passes to ensure program correctness.
 - Developed intermediate representations (IR) and execution logic to support structured control flow and expressions.
 - Engineered the compiler pipeline in C++ with modular components for extensibility and maintainability.

TECHNICAL SKILLS AND INTERESTS

Languages: Python, C/C++, Java, Rust, C#, JavaScript, SQL, HTML/CSS, Assembly, OCaml

Frameworks: TensorFlow, Keras, PyTorch, React, Next.js, Flask

Developer Tools: Git, Docker, Linux, Jupyter, VS Code

Cloud / Databases: AWS, Firebase, PostgreSQL, MySQL

Artificial Intelligence: OpenCV, CNNs, LSTMs, Transformers, FER, RAG, KAG, SegFormer

Coursework: Data Structures, Algorithms, System Programming, Machine Learning, Deep Learning, Computer Vision

POSITIONS OF RESPONSIBILITY

- **Seoul National University, Seoul, South Korea** - SISA IT Executive Member *Mar. 2024 - Aug. 2024*
- **Stella Maris School, Tangerang, Indonesia** - Mathematics and CS Club Member *Oct. 2018 - Jan. 2020*
- **Stella Maris School, Tangerang, Indonesia** - Student Council Secretary *Sep. 2018 - Aug. 2019*

ACHIEVEMENTS

- **Seoul National University, Seoul, South Korea** - CSE Young Courage Award Recipient *Feb. 2026*
- **Stella Maris School, Tangerang, Indonesia** - IBDP Senior Valedictorian *Jun. 2020*
- **Stella Maris School, Tangerang, Indonesia** - IBDP Senjaya's Scholarship *Aug. 2019*
- **World Mathematics Invitational, Fukuoka, Japan** - WMI Participation Award *Jul. 2019*