Rizky Johan Saputra

Seoul, South Korea
Computer Science and Engineering
Seoul National University, South Korea

🌐 Website
✉ flamablesrizky@gmail.com
⭕ GitHub Profile
in LinkedIn Profile

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 Baccalaurete 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.
  - Resolved website and SNS-related technical issues, improving operational stability during student events and announcements.
  - 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 in a hospital environment.
  - Managed and curated large-scale medical and inventory datasets, supporting real-time data access for internal stakeholders.
  - 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

- **Stella Maris School, Tangerang, Indonesia** - IBDP Senior Valedictorian *Jun. 2020*
- **Stella Maris School, Tangerang, Indonesia** - IBDP Senjaya's Scholarship *Aug. 2019*
- **World Mathematics Invitational (MVI), Fukuoka, Japan** - Participation Award *Jul. 2019*