

# Kyriel Abad

+65 91078746 | [kyriel@u.nus.edu](mailto:kyriel@u.nus.edu) | [linkedin.com/in/kyriel](https://www.linkedin.com/in/kyriel) | [github.com/s-kybound](https://github.com/s-kybound) | [s-kybound.github.io](https://s-kybound.github.io)

## EDUCATION

---

### National University of Singapore

Bachelor of Computing in Computer Science with Honours

- Specialisations in Parallel Computing, Programming Languages

Singapore, Singapore

Aug. 2022 – Present

## EXPERIENCE

---

### Source Academy Languages Head

Source Academy, National University of Singapore

- Oversaw expansion of online educational programming platform *Source Academy* into a multi-language system
- Coordinated developers of different languages to streamline language workflow
- Demonstrated attention to detail in conducting comprehensive code reviews to ensure quality

Apr. 2024 – Present

Singapore, Singapore

### Student Software Developer

National University of Singapore

*Student Software Developer I*

- Played a key role in implementing *scm-slang*, a transpiler for the Scheme programming language into JavaScript
- Collaborated as a team of 2 to integrate *scm-slang* into online education platform *Source Academy*

Jan. 2023 – Present

Singapore, Singapore

Jan. 2023 - May 2023

*Student Software Developer II*

- Spearheaded enhancement of *scm-slang* as part of self-initiated, independent research venture with a professor
- Expanded on integration of Scheme programming language into *Source Academy* with better module compatibility
- Upgraded capabilities of *scm-slang* to allow for language features beyond interpreter language JavaScript

Jan. 2024 - Present

### Undergraduate Teaching Assistant

National University of Singapore

- Taught 2 courses, CS1101S Programming Methodology and CS2100 Computer Organisation
- Delivered weekly tutorial lessons to a class of 6 (CS1101S) / 2 classes (49 students total) (CS2100)
- Assessed student assignments and provided useful feedback
- CS1101S: Received 4.8/5 teacher rating from students (Department average: 4.3/5)
- CS2100: Received 4.4/5 teacher rating from students (Department average: 4.3/5)

Aug. 2023 – Dec. 2023

Singapore, Singapore

### Training Coordination Clerk

Singapore Armed Forces, Officer Cadet School, Midshipman Wing

- Coordinated logistics preparation for exams or deployments of Naval Officer cadets
- Spearheaded discussion with superiors to automate menial administrative processes
- Devised applications such as *NSFAttendanceBot* to streamline office work

Sep. 2020 – Mar. 2021

Singapore, Singapore

## PROJECTS

---

**scm-slang** | *TypeScript, React, Scheme, Git*

- Implemented a transpiler from Scheme to JavaScript
- Devised methods to represent Scheme language features in JavaScript
- Enhanced *Source Academy* online platform to enable multi-language support

Jan. 2023 – Present

**Cody** | *Rust, Assembly, LLVM, Lisp*

- Built a compiler for *Cody*, a language based on Lisp in 24 hours for hackathon *Hack&Roll*
- Formulated a language specification in *Backus-Naur* form
- Programmed a compiler in Rust using LLVM package *Inkwell*

Jan. 2024

**Dplatform** | *TypeScript, Supabase, PostgreSQL, Git*

- Created an application to manage gym bookings and resolve booking conflicts
- Constructed database backend using open-source database *supabase*

May 2023 – Jul. 2023

**ZeroG** | *C#, Unity*

- Produced a zero gravity first person shooter game in 3 days for online Harvard University course *CS50x*

Feb. 2022

**NSFAttendanceBot** | *Python, Telegram API*

- Launched a Telegram attendance tracking system to automate attendance collation using *pyTelegramBotAPI*

Mar. 2021 – Jan. 2022

## EXTRA-CURRICULAR ACTIVITIES

---

### Noctua Publicity Committee Head

Residential College 4

*Aug. 2023 – Present*  
*Singapore, Singapore*

- Led a team of 9 members to produce publicity material for house activities
- Designed house merchandise and coordinated with suppliers to produce merchandise
- Oversaw house engagement on social media platforms such as *Instagram*

### RC4Lifting Vice Head

Residential College 4

*Mar. 2023 – Feb. 2024*  
*Singapore, Singapore*

- Managed RC4 gym and equipment maintenance
- Developed *Dplatform* application with a partner to manage gym bookings

### RC4Café Vice Head

Residential College 4

*Feb. 2023 – Feb. 2024*  
*Singapore, Singapore*

- Executed fortnightly cooking sessions to teach cooking skills and foster community spirit in RC4
- Planned and tested recipes for each session

### SJI Military Band Executive Committee (Recruiting Officer)

Saint Joseph's Institution

*Jun. 2016 – Jun. 2017*  
*Singapore, Singapore*

- Supervised training of 30 recruits to hone musical and military skills and knowledge
- Planned and executed band activities such as concerts
- Achieved SYF Distinction in 2017

## SKILLS

---

**Leadership**

**Teaching**

**Systems Thinking**

## TECHNICAL SKILLS

---

**Languages:** Java, Python, C, Rust, JavaScript, TypeScript, Coq, Scheme, Lisp

**Frameworks:** React, Node.js, JUnit, Unity, LLVM

**Developer Tools:** Git, VS Code, IntelliJ, Vim, Emacs

**Libraries:** pyTelegramBotAPI, estree, supabase

## LANGUAGES

---

**English** Native proficiency

**Japanese** Working proficiency