

# Jaehoon Song

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*Software engineer with 4+ years of full-stack and systems development experience. Proficient in C, C++, C#, Python, SQL, L<sup>A</sup>T<sub>E</sub>X, and more; focused on building reliable, maintainable software demonstrated through open-source contributions.*

## EDUCATION

**Georgia Institute of Technology** | Atlanta, GA

Dec 2025

*Bachelor of Science in Computer Science*

GPA: 3.87/4.00

- Completed coursework in calculus, linear and abstract algebra, probability & statistics, data structures and advanced algorithms, discrete mathematics, automata and complexity theory, and number theory with applications to cryptography.
- Developed expertise in frontend stack (data visualization with D3.js, OpenGL, Unity), project management, design documentation, and verbal and written communication
- Achieved Dean's List recognition, College of Computing, 2022

**Gwinnett Technical College** | Lawrenceville, GA

May 2021

*Associate of Applied Science in Computer Science*

GPA: 3.96/4.00

- Completed coursework in IT Analysis, Project Management, and Advanced Systems Project
- Developed expertise in Linux customization, operating systems, and C/C++ programming, application development (Java for enterprise and Python for data analysis and media processing), database management systems (Oracle SQL, MS Access), software architecture (MVC), socket programming, Java Beans, Servlets, JSP, RESTful APIs, and network configuration/security
- Earned Java Programmer Certificate, Honor's List (Spring 2019), and Award of Merit (May 2021)
- Member of Phi Theta Kappa, National Technical Honor Society, and Student Ambassador

## EXPERIENCE

**Columbia Academy** | Duluth, GA

Present

*Freelance Lecturer (1099 Contractor)*

- Instructed mathematics courses including AP Calculus, Linear Algebra, Multivariable Calculus, and Combinatorics for high school students
- Taught programming courses in JavaScript, Java, and Python following Georgia Tech CS 1301 and CS 1331 curriculum standards
- Delivered Physics 1, Physics 2, and Physics C instruction with hands-on laboratory components
- Developed comprehensive SAT bootcamp materials and published open-source educational resources on GitHub
- Created structured learning environments for AP Computer Science Principles and advanced mathematics preparation

**Georgia Institute of Technology, School of Physics** | Atlanta, GA

Sep 2025

*Teaching Assistant (TA)*

- Operated lab sessions for PHYS 2211 by Emily Alicea-Muñoz since January 2023.
- Assisted students in completing lab assignments and understanding physics concepts.
- Developed GlowScript local IDE tools for PHYS2211 and prepared course documentation using L<sup>A</sup>T<sub>E</sub>X typesetting system with professional teaching experience
- Applied knowledge of kinematics, dynamics, thermodynamics, energy and momentum in lab instruction
- Earned Faculty Honors from School of Physics, 2023

**Georgia Institute of Technology, School of Computer Science** | Atlanta, GA

Dec 2022

*Undergraduate Teaching Assistant (UTA)*

- Conducted office hours and recitation sessions of CS 2050 to support student learning in discrete mathematics and related topics under the supervision of the College of Computing faculty.
- Prepared and edited problem sets, solution guides, and recitation handouts using L<sup>A</sup>T<sub>E</sub>X and coordinated with instructors to align recitation content with course objectives
- Applied expertise in set theory, proofs, induction, combinatorics, basic graph theory, and introductory algebra/number theory for algorithms and cryptography

**SK C&C USA** | Suwanee, GA

Sep 2021

*Software Engineer/Developer*

- Developed and operated MES, WMS, and SCM systems for SK Global Battery manufacturing.
- Configured Windows OS and hardware systems, implemented networking (Ethernet) and transfer protocols, developed applications using .NET C# WinForms, and performed Oracle Database Administration (DBA) duties for enterprise systems

## PROJECTS

### Greater Youth Collaborative Opus (GYCO) | Remote

Oct 2025

Web Developer (Freelance)



- Developed a complete static website for Korean-American youth orchestra institution using SASS for Bootstrap customization and Vanilla JavaScript
- Implemented comprehensive website system architecture including SNS integration in footers, article management system for student administrators, and content management capabilities
- Created user-friendly admin interface enabling students to maintain and manage all article content independently
- Delivered fully functional, responsive website with custom styling and interactive features for youth community engagement

### TradingBot (Automated Trading System) | Remote

May 2025

Software Engineer/Developer



- Designed and implemented an automated trading system using low-level HTTP library (`request`) for direct API connectivity with brokers/exchanges.
- Built a scheduler-driven concurrency engine to continuously initiate and coordinate trading logic throughout the trading day with rate-limit and retry policies.
- Implemented robust risk and accounting modules: real-time asset tracking, per-instrument and portfolio P&L, debit/credit monitoring, cash-to-equity ratio checks, position sizing, and margin considerations.
- Developed order management, error handling, persistent logging, and reconciliation routines to maintain accounting integrity and auditability.
- Added integration tests and simulation tooling for backtesting/streaming validation; documented system architecture, deployment, and safety controls in the repository.

### Grady Health System | Atlanta, GA

May 2024

Software Engineer/Developer



- Developed a heart-care application to reduce hospital readmissions by detecting complications early from patient-reported data as a year-long capstone project coordinated with Dr. Muling Lin from College of Medicine, Emory University
- Led system architecture design and comprehensive design documentation
- Developed a local database (Prototype only available) with minimal UI and socket connection private networking using Apache Derby database engine with customized SQL for specific medical use cases
- Implemented statistical analysis modules for patient-reported data trends and alert systems for clinicians on the web portal
- Distributed mobile app for patients and secure web portal construction for clinicians, with intellectual property assigned to College of Medicine, Emory University

## SKILLS

**Language Proficiency:** English, Korean (Native), Japanese (Intermediate)

**Programming Languages:** Java/Kotlin, Python, C/C++/C#, JavaScript

**Domain-Specific Languages:** Bash for Linux and OS X (Linux Customization), Batch for Windows, Perl and AWK for text processing and system administration, HTML/CSS for web, LaTeX for typesetting, MATLAB and Mathematica for numerical computing

**Databases with SQL:** Oracle, SQLite, Microsoft Access, Apache Derby (Java embedded)

**GUI Frameworks and Libraries:** QT for C++, PyQt for Python, JavaFX, Java Swing, WinForms (.NET C#), Unity (C#)

**Web Frameworks and Libraries:** React, Node.js, Flask, FastAPI, SASS (Bootstrap customization), D3.js, Web hosting (Apache Tomcat, AWS)

**Testing Frameworks:** JUnit, PyTest, unittest, Unity Test Framework, NUnit (C#)

**Developer Tools:** Version Control (Git), GitHub/GitLab, Virtual Machine and Containers (Docker), Agile workflows (JIRA)

and Confluence), IDEs and Text editors (VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, etc.)

**Other Software Tools:** MS Office (Word, Excel, PowerPoint, Outlook), Adobe Design Tools, Cloud Services

## REFERENCES

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Available upon request.