Eric Yale Jung

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EDUCATION

Princeton University **Princeton, NJ**
Bachelor of Science in Engineering, School of Engineering and Applied Science, Computer Science *May 2026*
Minors: Statistics and Machine Learning, Robotics and Intelligent Systems
Relevant Coursework: Data Structures and Algorithms, Theory of Algorithms, Computational Models of Cognition, Advanced Computing Techniques, Quantum Computing, Computer Architecture

Ridgefield Memorial High School **Ridgefield, New Jersey**
GPA: 4.9/4, Valedictorian, SAT: 1590 *June 2021*
Student Council (President), Robotics Team (President/Captain), Math League (President), Academic Decathlon (Captain), DECA, World Language Honors Society, National Honors Society

CERTIFICATIONS

The Coding School: Introduction to Quantum Computing September 2022 – June 2023

- Implemented advanced quantum algorithms using Qiskit on IBM Quantum's hardware
- Gained comprehensive understanding of the quantum stack through instruction from professors at leading institutions
- Developed proficiency in quantum circuit design and optimization techniques

EXPERIENCE AND PROJECTS

Princeton University *Computer Science/Software Engineering Summer Course Instructor* June 2025 – August 2025

- Taught incoming Princeton students foundational programming and computer science concepts
- Designed and led problem sets and coding projects to strengthen algorithmic thinking and debugging skills

Nagpal Robotics Lab *Robotics and Computer Vision Researcher* January 2025 – August 2025

- Developed a robotic arm capable of playing Oh-Mok (Gomoku) against human players using computer vision (OpenCV) and Python AI evaluation functions integrating a combination of heuristics and Minimax for competitive performance

Research with Professor Marcel Dall'Agnol *Quantum Computing Researcher* June 2024 – Present

- Conducted cutting-edge research on quantum algorithms, developing and improving upon existing algorithms, in both the theoretical side (complexity theory) and the pseudo-applicational side (using Qiskit)
- Analyzed and optimized quantum circuits for improved performance on IBM's actual quantum hardware

Fledge *Full-Stack Web Developer/Designer* December 2023 – January 2024

- Engineered a responsive web application using React, HTML5, and CSS to streamline the recruitment process for new hires
- Implemented APIs to integrate task management and networking features
- Utilized agile methodologies in a collaborative team environment to deliver project milestones on time

Permanent Cosmetic Plus LLC *Head Web Developer* May 2023 – October 2024

- Architected a full-stack website for a service-based business, enhancing online presence and customer engagement
- Implemented responsive design principles and optimized site performance

Virtual/Augmented Reality 3D Printing Helping Software

- Created a software to aid in real-time 3D printing by overlaying a virtual model of the object on the printer bed using Python

Interactive Autonomous Robotic Oh-Mok (Gomoku) Player

- Engineered a robotic arm to physically play Oh-Mok competitively in real-time by integrating computer vision and AI
- Presented research and demonstrated robotic arm capabilities at Princeton University Research Day Conference

Web-Based Platform for Music Creation and Lyric Annotation

- Developed a dynamic web application using React, JavaScript, and Flask blending features of a digital audio workstation (DAW) with interactive lyric annotation tools
- Implemented real-time audio editing, playback, and annotation features using Tone.js
- Built a scalable backend to manage user accounts, audio file uploads, and synchronized lyric data using SQL
- Designed a user-friendly interface for seamless interaction with audio tracks and lyrics with Bootstrap, HTML, and CSS

Pokémon Game Simulator

- Developed a Java-based interactive game engine simulating complex Pokémon battle mechanics
- Designed and implemented an extensible database structure to manage diverse character attributes and interactions

ACTIVITIES

Princeton Students in Quantum *Officer/Undergraduate Lead* September 2021 – Present

- Spearheaded the organization of the annual Princeton Quantum Technology Conference, featuring renowned researchers
- Developed and led Qiskit workshops and hackathons, introducing 100+ students to quantum computing concepts and Qiskit
- Coordinated with Princeton faculty to organize seminars on cutting-edge quantum technology developments

Princeton Robotics Club *Software Engineer* September 2021 – Present

- Implemented machine learning algorithms for autonomous robot navigation and object recognition for drones

ADDITIONAL

Programming Languages: Java, Python, C, C#, Q#, Qiskit, CSS, HTML5, JavaScript, R, SQL
Languages: Korean (Native/Fluent), Spanish (Proficient)
Awards: Princeton Research Day, MIT iQuHack 2024 (3rd Place), New Jersey Math League 2017-2021 (2nd Place)