Daniel Jung

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EDUCATION

Princeton University, B.S.E. Electrical and Computer Engineering, Applied Physics Aug. 2022 - Expected 2026
Relevant Coursework: Computer Architecture, System Design, Robotic and Autonomous Systems.
Intended Minors: Computer Science, Finance

Georgia Institute of Technology/Mill Creek High School, Dual Enrollment Aug. 2020 - May 2022
Honors: National Merit Scholar, Rotary Youth Leadership Award, Jim Steele Environmental Scholarship.
Relevant Coursework: Linear Algebra, Multivariable Calculus, Applied Combinatorics, Differential Equations.

WORK EXPERIENCE

Princeton University de Leon Lab - *Undergraduate Researcher* Sept. 2025 - Present
9 hrs/week

- Characterized the impact of oxides on the superconducting properties of tantalum alloys (Ta/Re).
- Fabricated resonators for XPS, SEM analysis and T_C, Q factor measurement.

HSBC - *Markets Summer Analyst* June 2025 - Aug. 2025
50 hrs/week

- Worked on equity derivatives trading and FX institutional sales (derivatives-focus).
- Developed internal trading tools (Python) to assist exotics pricing.
- Performed analytics on client flow and systematic strategies.

Federal Energy Regulatory Commission - *Data Intern* June 2024 - Aug. 2024
50 hrs/week

- Used data from 500+ monitors to study the May 2024 geomagnetic disturbance and its grid impact.
- Developed 90% accurate neural networks to detect device faults and identify blind spots.
- Modeled event trends and potential transmission impacts using ArcGIS, Python, and other tools.

Hanwha Corporation - *Summer Analyst, Corporate Venture Capital* June 2023 - Aug. 2023
60 hrs/week

- Sourced and modeled 20+ potential investments in the clean-tech and national security spaces.
- Modeled the post-acquisition impact of Hanwha Ocean (previously DSME) with potential ancillary acquisitions.

PROJECTS

Experimental Methods in Quantum Computing

- Wrote control and analysis code for a basic NMR qubit setup manipulating protons/hydrogen ions.
- Created a GUI and control code to perform state measurements on NV centers (Rabi cycles, T_1, T_2, etc.).
- Performed and analyzed bell-state measurements using photonic qubits (optics).

Autonomous Mini Car

- Designed a vehicle using hall effect sensors (speed), cameras (path sensing), and a PSoC (control) to navigate around a course unmanned. Hardware and software self-designed.
- Used KiCAD (design), C (control), and Python (computer vision).

readMe: Translation Assistant

- Integrated Google Gemini and Groq APIs to build a LLM-powered translation assistant for language-learners.
- Used a React/Tailwind front-end with a flask back-end, both hosted on Vercel.

SKILLS & INTERESTS

Technical Skills	C, C++, Python, MS SQL, LaTeX, MATLAB, Git, Docker, UNIX Systems
Languages	English, Korean (TOPIK Lv. 6)
Interests	Embedded Systems, Neural Networks, Compilers