

Daniel Ju

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EDUCATION

Georgia Institute of Technology

M.S. Computer Science (OMSCS), Machine Learning specialization; part-time

George Washington University

Bachelor of Arts in Political Science and Computer Science

Remote

Aug. 2026 – Present

Washington, D.C.

Aug. 2022 – May 2026

RELEVANT WORK EXPERIENCE

Intern

May 2025 – Feb. 2026

GW Technology Commercialization Office

Washington, DC

- Summarized university patents, invention disclosures, and licensing activity into accessible briefs for non-technical stakeholders, supporting commercialization and outreach efforts.
- Managed internal and external communications including newsletters, targeted email campaigns, and LinkedIn content to promote research and technology commercialization initiatives.
- Maintained and updated the TCO website, improving content organization, accuracy, and accessibility of TCO events, research materials, and technology listings.

Research Assistant

Sept. 2024 – May 2025

Institute for International Economic Policy

Washington, DC

- Critiqued alongside Professor Susan Aaronson the NTIA's approach to open foundation models and identifying transparency and accountability challenges in AI governance.
- Synthesized and transcribed TRAILS conferences and webinars, hosting global experts on policy recommendations concerning tech governance, trade, and intellectual property.
- Analyzed 400+ public responses to Australia's *Supporting Responsible AI* outreach initiative, identifying stakeholder priorities and regulatory gaps in the country's AI governance frameworks + comparative analysis of 68 different national AI strategies and initiatives.

PROJECTS

WebRAG: Model Context Protocol Research Memory Server

[GitHub](#)

- Built a Python MCP research server with heading-based document ingestion, PostgreSQL/pgvector search, and cross-encoder reranking to give LLMs persistent, searchable web memory.
- Implemented concurrent query decomposition and character-offset citation reconstruction, returning verbatim source excerpts; added an agentic retrieve-evaluate-expand loop to gather supporting evidence.

The Convergence Mirage: Machine Learning Research

[GitHub](#) | [Paper](#)

- Benchmarked 8 classical and deep model families on 16-genre FMA-Medium across 40 reproducible runs; classical SVM (0.40 macro-F1) outperformed every from-scratch deep model under a controlled five-seed protocol.
- Used Centered Kernel Alignment and untrained-network controls to show that trained similarity (0.685) exceeded the untrained baseline by just 0.012; built the PyTorch/CUDA training and statistical evaluation pipeline.

Islands of Innovation: Semiconductor Patent Research

[GitHub](#) | [Paper](#)

- Analyzed CPC-filtered USPTO semiconductor patents and DoD R&D funding using county-year fixed-effects and distance-band models; found no statistically significant geographic spillovers after accounting for direct funding.

RELEVANT COURSEWORK

Algorithms; Data Structures; Software Engineering; Databases; Computer Systems; Systems Programming; Computer Architecture; Machine Learning; Neural Networks; Discrete Math; Calculus; Linear Algebra; Statistics.

Current graduate coursework: Machine Learning; Computer Vision.

TECHNICAL SKILLS & ADDITIONAL INFORMATION

Programming & Tools: Python, Java, C, SQL, TypeScript/JavaScript, Git; PyTorch, scikit-learn

Systems & Infrastructure: FastAPI, React/Next.js, PostgreSQL, Docker; Linux server administration and deployment

Languages: Korean (Fluent), French (Basic), Japanese (Basic) | **Patent bar:** studying; target Nov. 2026

Additional Experience: *Managerial Assistant*, Manna Korean Restaurant (2022–2023); *Summer Judicial Intern*, Los Angeles Superior Courts - Judge Torrealba (2024)