

# John J. Kim

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## EDUCATION

### University of Virginia

B.S. in Computer Science, School of Engineering and Applied Sciences

- GPA: 4.0/4.0

Charlottesville, VA

Aug. 2025 – Present

### Thomas Jefferson High School for Science and Technology

Advanced Studies Diploma

Alexandria, VA

Aug. 2021 – Jun. 2025

- GPA: 4.463/4.0; Relevant APs: CS A (5), Calculus BC (5), Physics (5 Mechanics, 5 E&M), Chemistry (5)
- Other Courses: AI 1 & 2, ML 1 & 2, Web & Mobile App Development, Multivariable Calculus, Linear Algebra

## EXPERIENCE

### Researcher — ML@UVA × Johns Hopkins APL

Sep. 2025 – Present

University of Virginia

Charlottesville, VA

- Explored the strategy game *Diplomacy* to study human-aligned decision-making in LLM agents
- Investigated methods for aligning AI decisions with human behavior distributions using fine-tuning
- Experimented with steering vectors and prompting techniques to mimic distinct human playstyles

### Full Stack Developer Intern

Jun. 2025 – Aug. 2025

MySmaX Lab (AIoT Startup), Seoul National University

Seoul, South Korea

- Developed and deployed an AI Agent using MCP that automated key IoT workflows, reducing manual configuration time for internal users and improving system responsiveness
- Served as a primary contributor to MySmaX's user-facing production web platform using Next.js

### Competitive Programming & Mathematics

2021 – Present

Clubs & Competitions

Charlottesville, VA

- USACO Gold Division
- American Invitational Mathematics Examination Qualifier (4x)
- Active member of the Putnam and ICPC Club at UVA; TJ Varsity Math Team

## PROJECTS

### Alpine Ski Racing AI Analysis Model (GitHub) | Python, YOLO, PyTorch, CNNs

Aug. 2024 – May 2025

- Built a deep neural network using CNNs to give ski racers quantitative feedback from a video
- Used computer vision models to analyze videos and extract skiers' pose data
- Achieved reliable results that consistently aligned with real race performances

### Offline AI Model for North Korea | Python, LangChain, HuggingFace, Unslloth

Jun. 2024 – May 2025

- Researched secure ways for distributing reliable information in North Korea
- Developed an offline generative AI solution by fine-tuning existing LLMs
- Received a \$7,500 grant from the Human Rights Foundation recognizing innovation and potential social impact

## TECHNICAL SKILLS

**Languages:** Python, Java, C++, JavaScript, TypeScript, HTML, CSS

**Frameworks:** React, Next.js, Django, Tailwind CSS, MCP, FastAPI

**Developer Tools:** Git, Docker, Linux Shell, Jira, AWS, VS Code

**Libraries:** PyTorch, TensorFlow, NumPy, pandas, LangChain, HuggingFace, Agno, Unslloth

## LANGUAGES & OTHER

**Languages:** English (Native), Korean (Native), Latin (Advanced Prose & Poetry)

**Other:** Alpine ski racer; certified junior ski coach