Yongjin Lee

Ithaca, NY 14850

(808) 421-7457 | yl2889@cornell.edu | github.com/yongjinlee | tinyurl.com/yongjinlee

EDUCATION

Cornell University, College of Engineering   **Ithaca, NY**
B.S. in Computer Science   *Expected Graduation May 2028*
GPA: 3.878 | Fall 2022, Spring 2023 Dean's List
Relevant Coursework: Python Programming and Computing | Multivariable Calculus for Engineers | Object-Oriented Programming and Data Structures | Linear Algebra for Engineers | Discrete Mathematics | Frontend Development

TECHNICAL EXPERIENCE

Yonsei University Wireless Networking Research Lab   **Seoul, South Korea**
Research Intern   *Feb 2025 – Current*
- Simulated federated learning-based 200-line PyTorch ML script to accurately predict user content request with MovieLens data consisting of 3,883 movies, allowing efficient content delivery from cache-enabled UAVs to users
- Co-authored research optimizing low Earth orbit satellite path selection through graph pruning and A* search algorithms for path optimization, resulting in 10% improved content throughput compared to existing methods
- Analyzed various satellite networking algorithms including deep reinforcement learning and transformer-based training

Cornell AguaClara Research Team   **Ithaca, NY**
Laboratory Researcher   *Jan 2023 – May 2023*
- Experimented water purification method applying floc filtration and coagulant implementation 5hrs/week during laboratory meetings to investigate 6 ranges of flocculation pollutant sizes, ranging from 2~3μm to 33~65 μm
- Applied Python script to graphically analyze pollutant level of filtered water that passes through floc particle counter
- Presented final results of 12-weeks research in project team symposium to research members and advising professors

PROJECTS

RAG-LLM Impersonation Chatbot   **Seoul, South Korea**
AI Engineer   *Summer 2025*
- Processed and cleaned 40MB of user's Meta DM JSON using OpenAI vector embeddings and Pandas to analyze user communication patterns, integrating the processed data with an interactive Anthropic chatbot with Next.js API routing
- Built RAG chatbot into full-stack application with React and Tailwind frontend, and integrated backend API

Dynamic Full-stack Blog   **Seoul, South Korea**
Full-stack Developer   *Spring 2025*
- Developed full-stack dynamic blog platform featuring Giphy-integrated comments, email subscription system via Nodemailer, and MongoDB database managing 4 blog posts and 24 user comments with <800 ms page load times
- Implemented responsive comment system and automated email subscription feature supporting 23 active subscribers

Cornell Digital Agriculture Hackathon   **Ithaca, NY**
Developer, Product Designer   *Spring 2023*
- Collaborated with a 4-person development team to create an agricultural planning application featuring a Google Calendar-style interface and designed data visualization tools for crop growth monitoring and management with Figma
- Discussed relevant topics with 4 agri-tech and business mentors and presented final product to advising professionals

LEADERSHIP EXPERIENCE

United Nations Command Interpreter   **Paju, South Korea**
Interpreter, Squad Leader   *Aug 2023 – Feb 2025*
- Interpreted for the ROK, UNC, and NNSC in the JSA Battalion to coordinate various military operations and exercises
- Led 14-member squad in company-level meetings and exercises, while serving as a soldier peer counselor for 3 months
- Awarded Certificate of Appreciation by US 2ID Maj. Gen. for exceptional service in '24 Operation Freedom Shield

SKILLS

Languages: Java • Python (PyTorch • Pandas • Scikit-Learn) • JavaScript (Next.js • React.js • Node.js) • HTML • CSS
Other: LaTeX • Postman • Figma • Prompt Engineering • Git • Command Line Tools • Data Structures & Algorithms