HAOYU(ALVIS) YAN

210 Lake St, Ithaca, NY 14850 || (215) 960-1011 || alvis.yan26@gmail.com || https://github.com/AlvisYan2025 ||
https://alvisyan2025.github.io/My-Website/ || https://www.linkedin.com/in/alvis-yan/

EDUCATION

New York University September 2021 - May 2025
- Bachelor of Arts in Computer Science and Economics. GPA: 3.9/4.0

Cornell University August 2025 - Present
- Master of Engineering in Computer Science with a concentration in Machine Learning. GPA: 4.0/4.0

SKILLS

Programming Languages: Python, C++, C, JavaScript, and R
Tools/Technologies: PyTorch, CUDA, TensorFlow, Keras, SQL, Figma, Git, Docker, React, Next.js, and Excel
Relevant Courses: Machine Learning Systems, Cloud Computing and ML Hosting, Deep Learning

PROFESSIONAL EXPERIENCE

Xenon Health December 2025 - Present
Software Engineer Intern Jersey City, NJ
- Developed a medical record extraction system with a team of engineers that extracts information from medical records (such as billing, payments, and patient information).
- Analyzed, conducted benchmarking experiments on, and optimized the machine learning pipeline that handles payment information extraction from PDF files. Implemented a filtering-extraction two-phase pipeline with automated accuracy tests. Achieved 100% accuracy on a 481-page test set in the latest design.
- Added both front-end and back-end features for billing claim creation, review and submission. Enabled end-to-end claim processing within the platform.

Food Charity Network July 2025 - December 2025
Project Manager Intern/Volunteer Remote
- Coordinated engineering teams to build an application to connect local stores and food donors to local charitable and non-profit organizations.
- Oversaw the development process, manage sprints, identified blockers and constraints, and tracked all activities and changes using **Excel**.
- Planned quarterly board meetings, prepared and delivered quarterly presentations to stakeholders using **Google Slides.**

Bimini Vision April 2024 - February 2025
Software Engineer/Machine Learning Engineer Intern Remote
- Designed and engaged in building a platform in **React** for ophthalmologists to manage patients' data and reservations.
- Built deep learning models with **PyTorch** and **Transfer Learning** to predict vault sizes (the space or distance between a contact lens or intraocular lens and the cornea) with OCT images (a non-invasive imaging scan of the eye) from ~200 patients. Achieved around 90% prediction accuracy within 400 microns for ResNet-based models.
- Developed, optimized, and maintained the company's web application and website using **Streamlit**, **JavaScript** and **HTML**. (https://iclvaultapi.streamlit.app/).

PROJECT EXPERIENCE

Blockchain-based Carbon Market August 2025 - Present
Research Project Developer Ithaca, NY
- Participated in the development and enhancement of a carbon credit trading market based on **Hyperledger Fabric Blockchain** with a full-stack architecture, led the back-end team.
- Designed and integrated a hybrid **blockchain-PostgreSQL database** structure where Hyperledger Fabric serves as the source of truth for carbon credit transactions, and PostgreSQL acts as a queryable replica for backup.
- Implemented API services for synchronized data management and data backup/restoration functionalities.
- Achieved functional back-end double-auction logic on the synchronized database system along with compatible front-end functionality.

Building Bond Fund Portfolio with Machine Learning May 2024 - May 2025
Research Assistant New York, NY
- Participated in a research project based on this paper led by Luofeng Zhou to apply Machine Learning in constructing mutual fund portfolios and making data-driven investment decisions.
- Constructed **PyTorch** deep-learning models to predict abnormal returns of bond funds and identify groups of funds that are expected to have higher/lower returns. Performed **data preprocessing** and **hyperparameter tuning**.
- Defined deep learning models in the project, visualized fund performance, calculated sensitivities and Sharpe ratios, and performed data analysis to identify investment opportunities and conduct risk assessment using **Pandas**, **NumPy,** and **Matplotlib**.