YUTO MARUYAMA

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EDUCATION

ILLINOIS INSTITUTE OF TECHNOLOGY Chicago, IL

Bachelor of Science in Computer Science Expected May 2026

Major in Computer Science Specialising in Artificial Intelligence and Data Science

ADDITIONAL

Technical Skills: Java, Ruby, SQL, JavaScript, HTML/CSS, Python, Pytorch, Matplotlib, Swift, Linux, NumPy/SciPy, R
Languages: Fluent in Japanese, English
Awards: Finalist Career Koushien(business competition) out of 8000 participants (2020);
Certification: Website Audience Analysis - Global career accelerator

PROFESSIONAL EXPERIENCE

Dynamic MRI and CT Segmentation AI Characterisation Approach - Illinois Institute of Technology Chicago, IL

Researcher Jan 2025 – Present

- Improve the accuracy and reproducibility of implant detection and longitudinal tracking in dynamic MRI/CT, which increase the safety.
- Built a PyTorch-based end-to-end pipeline from ITK-SNAP labels to automated 3D U-Net/nnU-Net inference with TorchIO augmentations, mixed precision, and 5-fold CV. Reduced manual edit time, reducing centroid MAE.

LVMH(Moët Hennessy Diageo) - Internship Tokyo, JP

Data Analyst and demand operation June 2025 – Aug 2025

- Built a hybrid analytics workflow by linking Power BI dashboards with Jupyter Notebooks, cleaning and aggregating ~250,000 rows of historical sales and inventory data across 8 product categories and 10 markets using pandas, and visualising supply–demand trends with matplotlib.
- Developed and compared 3 machine learning models in scikit-learn (baseline linear regression, random forest, and gradient boosting) to forecast monthly demand 1–3 months ahead; the best model improved forecast accuracy to ~70% and reduced mean absolute percentage error (MAPE) from 22% to 13%, supporting more precise supply and demand planning.

GA technology - Internship Tokyo, JP

Software Engineer June 2024 – July 2024

- Working on a team, attentively consider each member's perspective and collaboratively work towards innovative solutions that incorporate diverse viewpoints, coordinate a program on Shell script for Ruby development process, making file handling and debugging more efficient.. Ultimately leading to well-informed and mutually beneficial decisions.

PROJECTS

AI Finance chatbot(CrewAI, GNN, RNN, SQL Vector Search) Sep 2025

- Designed and implemented an AI-powered finance chatbot that uses RNNs trained on Kaggle stock price datasets and GNNs to model relationships between assets, sectors, and indices.
- Integrated these components into a CrewAI-based multi-agent workflow that provides efficient, tailored answers for personal finance questions, portfolio management insights, and investment strategy explanations.

Mesh-based Brain MRI Progression Modeling – Alzheimer's Disease May 2025

- Built a neural network that operates on mesh nodes to predict future disease progression time in Alzheimer's disease, using the mesh-derived features as input and evaluating performance on longitudinal MRI data to support earlier and more quantitative prognosis. More specifically, a PyTorch mesh-based neural network that operates on vertex features and pools them into subject-level embeddings across 3–4 visits per patient to predict time-to-conversion.

LEADERSHIP

IIT Soccer Club Chicago, IL

President Sep 2023 – Present

- Recognizing the importance of physical activity in a tech-focused academic environment, organizing soccer events that provide students with an opportunity to refresh their minds, enhance cognitive function, and build meaningful connections.
- Collaborating with university departments and external organisations to secure sponsorships, field reservations, and funding opportunities to enhance club resources.