Taichi Kato

http://taichikato.com

Email : tkato24@amherst.edu

Mobile : +1-413-275-4569

EDUCATION

Amherst College | B.A. in Computer Science and Mathematics | *Amherst, MA* *Expected: May 2024*

- **Major GPA: 3.85**/ **4.00** | Cumulative GPA: 3.75 / 4.00 | **Davis Scholar**
- **Relevant Coursework**: Graph Theory, Probability and Computing, Combinatorial Optimization, Linear Algebra, Data Structures, Artificial Intelligence, Systems, Networks, and Advanced Microeconomics
- **Teaching Assistant** for Networks (2023F), Computer Systems (2022S)
- **President** of Entrepreneurs Society and Japanese Culture Club. Member of Crew Team

United World College of South East Asia | International Baccalaureate Diploma | *Singapore* *May 2020*

- **GPA**: 43/45 (98th percentile)

EXPERIENCE

Microsoft | Software Engineer Intern | *Redmond, WA* *June 2023-August 2023*

- Designed and developed a extensible distributed time series analysis pipeline with R, Spark, and Python, with first application in Volume Licensing Contract Forecasting.
- Led optimization initiatives for Finn, an open-source library for distributed time series analysis.
- Enhanced model robustness by introducing novel feature engineering techniques, directly contributing to improved forecasting capabilities.

Microsoft | Software Engineer Intern | *Redmond, WA* *June 2022-August 2022*

- Developed RESTful APIs for visualizing third party compliance and fraud risk for due diligence
- Deployed statistical models as **Azure** microservices using **C#.NET**.
- Reduced human review hours by **18,000** per month with cost-savings of **$3M** from prevented fraud cases.

Amherst College | Analyst Intern | *Amherst, MA* *June 2021-August 2021*

- Created forecasting models for an entrepreneurship program at Amherst.
- Collected qualitative and quantitative data from rival institutions, and created a suggestion for establishing a program at Amherst.
- Presented the analysis and suggestions to the Amherst College President.

Questo AI | Software Engineer (Co-founder) | *Singapore* *November 2016-August 2020*

- Developed proprietary language model for generating questions from texts and images, using **Python** and **C**.
- Deployed the model as a web API to a distributed system using **Kubernetes**.
- Designed and developed an iOS interface for a image processing model using Swift.
- Generated **$56,000** in revenue, received **$160,000** in grants from Google and IBM, and generated **8,000** downloads.

University of Tsukuba | Machine Learning Research Intern | *Tsukuba, Japan* *July 2018-August 2018*

- Developed a model to extrapolate 2D images to 3D voxels using a Generative adversarial network (**GAN**) with **PyTorch**. Advised by Professor Ochiai. Presented a poster on the research.

Mercari, Inc. | Software Engineer Intern | *Tokyo, Japan* *June 2018-July 2018*

- Minimized the size of price prediction and object detection models **by 70%** using **Tensorflow** through quantization and pruning, allowing them to run on mobile devices without sacrificing accuracy.
- **Reduced the cost** required to process listings from **16 million** monthly active users
- Developed a service which gives real-time resell price predictions of objects via the iPhone camera.

teamLab, Inc. | Software Engineer Intern | *Tokyo, Japan* *June 2017-July 2017*

- Developed a data provider and state management framework deployed across all company iOS apps, using **Swift**.
- Was the youngest employee at 15 years old. Also given a full-time return offer.

PROJECTS

- **Minerva (2023)**: Awarded **Overall Winner** (Won $3000 in prizes, 600+ participants) at HackUMass 2023. A classroom simulation for educators to improve lectures through modelling student comprehension, using LLM agents and simulated teacher student interaction. Built with **Semantic Kernel, Python and React**.
- **Solar Cell Material Discovery (2022)**: Used evolutionary computing to create an approximate model for solar cell efficiency as a function of its quantum properties. Developed with **Clojure**.
- **UChicago Trading Competition (2021)**: Developed a live **price model** for FX futures based on market quotes, interest rates data, and historical prices using Python. Created a market making bot to automatically place asks and bids following a risk limit.
- **Zipcall (2020)**: Developed multi-client decentralised video-calling service using **React** and **Javascript**. **100K MAU**.
- **Kafka NLP (2020)**: Developed the first-ever open-source implementation of dependency parsing on iOS
- **Photonify (2017)**: **Awarded $30,000** for Most Creative@SWSG2017 – (550+ hackers); built an app that analyses image composition, and displays real time guidance to improve mobile photography