

# Taichi Kato

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## EDUCATION

**Amherst College** | Amherst, MA | *Bachelor of Arts in Computer Science and Mathematics* Expected: May 2024

- **GPA:** 3.7 / 4.0
- **Relevant Coursework:** Artificial Intelligence, Computer Systems, Data Structures, Probability and Computing, Multivariate Calculus, Discrete Mathematics, Advanced Microeconomics and Modern Physics
- **Honors:** Davis UWC Scholar

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

- **GPA:** 43/45 (98<sup>th</sup> percentile)
- **Honors:** Bilingual Diploma in Japanese and English
- **Thesis:** Evaluating Marx and Nietzsche's ideas of *entfremdung* and *ressentiment* in the context of increased technological automation (Computer Science and Philosophy)
- **Leadership Activities:** Computer Science Club President; Photography Club President

## EXPERIENCE

**Amherst College** | Amherst, MA | *Innovation and Entrepreneurship Intern* June 2021-August 2021

- **Quantitative analysis** on the effectiveness of Entrepreneurship programs at US universities using language analysis with Python. Created a report on entrepreneurship program at Amherst College with recommended funding of \$3 mil.

**Questo AI** | Singapore | *Co-Founder and Software Engineer* November 2016-August 2020

- **Built** a service that generates quizzes from learning materials
- **Researched and developed** a novel question generation algorithm modifying a neural translation model, collaborating with two other engineers, using **Numpy, Pandas, Tensorflow, and PyTorch**. Shipped to production as micro services using **Python, Flask and Google Cloud**. Developed our deployment pipeline using **Docker, Kubernetes, and Travis CI**.
- **Designed and developed** the iOS application using Swift and CoreML, as well as machine learning solutions for consulting clients, generating **\$56,000** in revenue.
- **Led** an organic marketing campaign, attaining **8,000 downloads** from ProductHunt(500+, #1 Product of the Day) and HackerNews(#1, 140+ upvotes) and granted **\$160,000** in subsidised funding from Google Cloud and IBM.

**University of Tsukuba** | Tsukuba, Japan | *Deep Learning Researcher Intern* July 2018-August 2018

- **Researched** 2D to 3D extrapolation with GANs under direct mentorship of Prof. Ochiya Yoichi at the Digital Nature Group. **Presented** a poster on the research.

**Mercari, Inc.** | Tokyo, Japan | *Machine Learning Engineer Intern (16 years old)* June 2018-July 2018

- **Minimized the size** of price prediction and object detection models **by 70%** using **PyTorch and 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**
- Rapidly developed an iOS prototype which gives real-time price predictions of objects in the camera feed.

**teamLab, Inc.** | Tokyo, Japan | *Software Engineer Intern (15 years old)* June 2017-July 2017

- **Initiated and led** the development of an internal Redux framework for iOS, which has been used extensively in company's future projects. Collaborated with designers, business development, and back-end engineers on developing an iOS applications using **Swift**.

## EXTRACURRICULAR ACTIVITIES

**Amherst College Activities** | Amherst, MA |

- President of Entrepreneurship Club. Member of Quantitative Trading Club, Poker Club, and Rowing Team.

**YouthHacks** | Singapore | *Founder/Lead Organiser* 2019-2020

- Organised Singapore's largest pre-university hackathon, hosting **180 participant** with **\$5,000** in sponsorships

## PROJECTS

- **UChicago Trading Competition (2021):** Developed a FX market making bot which arbitrated across markets, analysed monetary policies data, and analysed past prices using Python. Placed 5th out of 50 participating teams
- **Zipcall (2020):** Developed multi-client decentralised video-calling service as a contributor. **100,000 MAU**
- **Kafka NLP (2020):** Developed the first-ever open-source implementation of dependency parsing on iOS
- **Bookworm (2019):** Awarded the Best Pre-University Hack Prize@NUS Hack'n'Roll (331 hackers); built a dictionary app which makes physical books interactive, using **OpenCV and React Native**
- **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

## SKILLS

Leadership, Teamwork, Collaboration, C, C++, Swift, Objective-C, Python, React, Javascript, SQL, Java, Testing, OOP, Tensorflow, scikit-learn, Algorithms, Git, AWS, GCP, Jupyter Notebooks