

# Takao Shimizu

<https://tshimizu97.github.io>

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## Education

- Middlebury College**, Middlebury, VT, USA Expected March 2021  
**Candidate for Bachelor of Arts:** Computer Science & Neuroscience
- **Predicted Computer science major GPA:** 3.83/4.00
  - **Language Skills:** Native Japanese Speaker, Elementary French
  - **Programming Languages:** Python, C, Swift, Javascript, Java, R
  - **Other Tools and Frameworks:** HTML, CSS, React, Next.js, Xcode, Google Cloud Platform, Firebase, Git (GitHub)
  - **APIs and Datasets:** Google Maps API, numpy, pandas, pytorch, MNE Python, UK Biobank
  - **Relevant Coursework:** Systems Programming, Algorithms and Complexity, Computer Systems Security, Bioinformatics Algorithms, Data Structures, Multivariable Calculus
- University of Helsinki**, Helsinki, Finland September 2019 - May 2020  
**Master's Programme in Neuroscience: Visiting Student**
- **Relevant Coursework:** Advanced Machine Learning, Trustworthy Machine Learning, Machine Learning in Molecular Biology, Computational Statistics (Bayesian statistics)
  - **Activities:** Helsinki Debating Society
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## Experience

- Institute for Molecular Medicine Finland (FIMM)** Helsinki, Finland  
**Research Assistant for Andrea Ganna, PhD** March 2020 - Current
- Worked on a project to predict healthcare outcomes using deep learning models with nation-wide registries and Google Map data
  - Created an API wrapping around Google APIs that collects and pre-processes geographical data from Google Map based on UK Biobank data structure
  - Built CNN models for image classification and regression
- Aalto University** Helsinki, Finland  
**Research Assistant at the lab of Riitta Salmelin, PhD** March 2020 - August 2020
- Worked on a project to model human brain activities in visuo-cognitive tasks using deep learning model combining CNNs and Word2Vec
  - Developed a tool to visualize representational dissimilarity matrices on 2D head topography as a part of a Python API for brain data analysis
- Bank of America Merrill Lynch** Minato, Tokyo, Japan  
**Investment Banking Summer Analyst** June 2019 - August 2019
- Helped build pitch materials within industry groups; client coverage included software, internet, semiconductors, industrial, retail, staffing, and financial sponsors
  - Conducted research on trends in a third party allotment of common stocks, stock options, and convertible bonds in Japan
- LeapMind** Shibuya, Tokyo, Japan  
**Business Development and Research Intern** June 2018 - August 2018
- Simulated and analyzed brain signals and EEG data using mathematical models such as autoregressive models, ICA, and CNNs
  - Conducted qualitative research on UX and marketing of the company's products and presented to the business development team and the CEO
- Institution for a Global Society (IGS)** Shibuya, Tokyo, Japan  
**Business and Data Science Intern** June 2017 - August 2017
- Analyzed and classified numerical and text data of more than 70,000 users of a company's application using ML algorithms such as k-means, SVD and LDA
  - Led 4 college students of a summer business intern team and designed a prototype for a new EdTech service