

Seiji M. Sakurai

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Skills

- **Languages:** Python · Javascript · HTML/CSS
- **Software:** Sketch · Figma · Invision

Experience

National Graduate Institute for Policy Studies

Research Assistant

Tokyo, Japan
July 2018 – August 2018

- Analyzed higher education data and communicated results to policy makers
- Processed 30+ GB of data related to higher education using Pandas and Numpy

Alpaca

Software Engineer

Kobe, Japan
May 2016 – August 2016

- Implemented an AI based on Google Deep Mind Paper
- Proposed and implemented new machine learning algorithm for automatic pattern recognition
- Algorithm was used for the prototype of the product

Projects

Patient fMRI Classification

- Programmed an algorithm using the XGBoost random forest to classify schizophrenia patients through modal fMRI data
- My research successfully improved algorithm precision and accuracy by 8% than previous study
- The algorithm also identified potential regions that may function as biomarkers.

Classification of Un-Detonated Explosives Using Aerial Photography

- Created a machine learning algorithm that uses photos from World War II to classify an area is likely to contain un-detonated explosives
- The training data was created through the use of a image processing algorithm in OpenCV
- I hand classified the 1750+ images used to train the algorithm.

Stamp Rally Web App to Promote Tourism

- Created a web app with a team to promote tourism in a city in the Tohoku region, effected by the 2011 earthquake
- The project was done in conjunction with the local government who helped us in giving direction and suggestions for the project.
- The web app I created incentivized visitors to explore the various land marks in order to get a reward from a local shop.

Recognition

- **Awards:** **GENIUS Science Olympiad (International) - Finalist for Environmental Science Category**
Japan Science and Engineering Challenge (National/ISEF Qualifier) - Semi-finalist
Local Innovation Competition - Corporate Award
- **Certification:** Coursera - Data Scientist's Toolbox · R Programming · Regression Models

Education

University of Waterloo

Candidate for Bachelor in Honours Mathematics

Waterloo, ON

September 2018 – February 2023