Pasig City, 1604, Philippines
https://github.com/reiinakano

REIICHIRO S. NAKANO

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EMPLOYMENT

Data Scientist/Software Engineer **Adatos** **October 2016-present**

- Designed the back-end architecture of Adatos' core cloud products, enabling AWS servers to handle multiple users concurrently running time and compute-intensive machine learning algorithms.
- Designed the API and wrote code and unit tests of Adatos machine learning-based web applications.
- Implemented containerization and deployment of cloud products using Docker and Kubernetes resulting in quicker and easier deployment and local development.
- Set up an automatic Docker image build server using Jenkins.
- As primary AWS engineer, ensured AWS best practices for security and costs are followed, including proper management of IAM users and roles, encryption of sensitive S3 data, and the use of spot instances for EC2.
- Set up and ran Spark on AWS EMR to process 1000+ GB of client data.
- Led the company effort in adoption of ISO 27001 as a framework to ensure information security and best practices.

EDUCATION

Manila, Philippines **De La Salle University-Manila** **2011 – October 2016**

- M.Sc. in Electronics and Communications Engineering, October 2016. GPA: 3.6000
- B.Sc. in Electronics and Communications Engineering, October 2016.
- Graduate Coursework: Advanced Mathematics, Methods of Research, Technopreneurship, Genetic Algorithms, Fuzzy Logic, Neural Networks, Robotics
- Graduate Thesis: *Simulation and Implementation of Physicomimetics in Quadrotor Swarms*

TECHNICAL EXPERIENCE AND NOTABLE PROJECTS

- **Scikit-plot** (2017*, personal project*). Creator of a small open-source library that adds plotting functionality to scikit-learn objects in an effort to make visualization in common data science tasks a lot easier and more intuitive. Currently has 400+ stars on Github. Python, http://github.com/reiinakano/scikit-plot
- **Design and development of quadrotor swarm as a test bed for swarm algorithms** (2016). Designed software architecture and system to autonomously control a swarm of quadrotors through radio signals from a central server. Designed and coded dual-stage PID controller for flight stabilization. Added modularity to the system to allow team members to easily upload swarm algorithms for testing. Used physicomimetics as a basis for a self-organizing and self-adapting swarm algorithm. Python
- **DLSU Eco Car Electrical team member 2014-2016** (2014-2016). Personally designed, fabricated, and programmed a motor controller, battery management system, speed sensor, lights board, wiper board, and SD card based memory module for Shell Eco-Marathon Asia 2014-2015, and SEM Europe 2016. C
- **WiFi sniffer** (2016, *personal project*). Designed a program to automatically capture and decrypt random WiFi signals from the air and display packet information in a user-friendly GUI. Python
- **Neural network for recognition of in-flight quadrotor images** (2015). Wrote neural network to recognize images of CrazyFlie quadrotor in flight with up to 94 percent accuracy. C
- **Sikat Solar Challenge 2015 DLSU-Manila team member** (2015). Helped design and propose a business model aimed at installing micro-hydro power plants in various rural and isolated communities in the Philippines.
- **1x1x1 inch remote-controlled robot** (2014). Part of team that designed, fabricated, and programmed a 1in x 1in x 1in remote-controlled robot for competition in the International Micro Robot Maze 2014 contest held in Nagoya, Japan. C
- **Remote-controlled home appliance switch** (2014, *personal project*). Designed, fabricated, and programmed an infrared remote control-based system for remote switching of common household appliances. C

ADDITIONAL EXPERIENCE AND AWARDS

- **Open-source software contributions (2016-2017):** Wrote both the implementation and the corresponding unit tests of a stacked generalization ensemble classifier using cross-validation for *mlxtend*, an open-source library of extension and helper modules for Python's data analysis and machine learning libraries. Minor contributions to *Kube-AWS* and other open-source libraries.
- **Started 3D printing business (2015 onwards):** Started offering 3D printing services to customers near my location. Used Facebook as the main avenue for advertising and customer acquisition. Facebook page currently at 11K likes (Get 3D PH – Philippines 3D Printing).
- **Philippine government scholarship recipient (2014-2016):** Recipient of DOST-ERDT scholarship for Master's students.
- **University scholarship recipient (2011-2016):** Recipient of Bro. Andrew Gonzalez Academic Scholarship for undergraduate studies.
- **Published and presented academic papers (2014-2016):** Multiple scientific papers (two as first author) regarding quadrotor swarming algorithms accepted and published into IEEE conference proceedings.

Languages and Technologies

- Python (proficient), C (PIC embedded applications), Matlab (prior experience), Java (prior experience)
- Amazon Web Services, Docker, Kubernetes, Scikit-learn, Numpy, Keras, Spark