

EMPLOYMENT

Lead Data Scientist	Adatos	June 2017-present
Data Scientist/Software Engineer	Adatos	October 2016-June 2017
<ul style="list-style-type: none">Designed the back-end architecture of Adatos' core cloud products from scratch, enabling AWS servers to handle multiple users concurrently running time and compute-intensive machine learning algorithms. Designed the API and wrote both the code and unit tests for the backend. Tools used: Flask, Celery, RedisImplemented containerization and deployment of cloud products using Docker and Kubernetes. Time from commit to test server deployment reduced from 20+ minutes manually to 10-15 minutes with minimal human intervention, resulting in quicker and easier testing and local development. Containerization also allowed uniform deployment on AWS servers and IBM Minsky servers, removing server-specific configuration entirely.Set up an automatic Docker image build and push server using Jenkins, fully automating a 5-10 minute process running 20+ times a day.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. Spot instances reduced our EC2 cost by up to 50-90% per EC2 server (depending on spot price).Set up and ran Spark on AWS EMR to perform preprocessing and clustering for micro-segmentation on 1000+ GB of client data.Led the company effort in adoption of ISO 27001 as a framework to ensure information security best practices.Used Tensorflow to build and validate a deep neural network for identification of tuberculosis signs in Chest X-ray images. Used transfer learning on a public dataset of only 660 images and increased sensitivity to 100% while keeping specificity at 80%.Used NLTK and Flask to build a small demo web server showcasing Adatos sentiment analysis capabilities.		

EDUCATION

Manila, Philippines	De La Salle University-Manila	2011 – October 2016
<ul style="list-style-type: none">M.Sc. in Electronics and Communications Engineering, October 2016. GPA: 3.6000B.Sc. in Electronics and Communications Engineering, October 2016.Graduate Coursework: Advanced Mathematics, Methods of Research, Technopreneurship, Genetic Algorithms, Fuzzy Logic, Neural Networks, RoboticsGraduate Thesis: <i>Simulation and Implementation of Physicomimetics in Quadrotor Swarms</i>		

TECHNICAL EXPERIENCE AND NOTABLE PROJECTS

<ul style="list-style-type: none">Xcessiv (2017, <i>personal project</i>). Creator of a web-based tool for use in automated hyperparameter search and stacked ensembling. Mentioned by Kaggle on Twitter and LinkedIn. Currently has 800+ stars on Github. Python, ReactJS, https://github.com/reiinakano/xcessivScikit-plot (2017, <i>personal project</i>). 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 800+ stars on Github. Python, https://github.com/reiinakano/scikit-plotDesign 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. PythonDLSU 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. CWiFi sniffer (2016, <i>personal project</i>). Designed a program to automatically capture and decrypt random WiFi signals from the air and display packet information in a user-friendly GUI. Python1x1x1 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. CRemote-controlled home appliance switch (2014, <i>personal project</i>). Designed, fabricated, and programmed an infrared remote control-based system for remote switching of common household appliances. C		
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ADDITIONAL EXPERIENCE AND AWARDS

<ul style="list-style-type: none">Open-source software contributions (2016-2017): <i>scikit-learn</i>: Fixed a software regression in the v0.19 release; <i>mlxtend</i>: Wrote implementation and unit tests of a stacked generalization ensemble classifier; <i>Keras</i>: Extended Keras classifier's scikit-learn wrapper to handle string classes. Minor contributions: <i>Kube-AWS</i>: Documentation fix.Philippine government scholarship recipient (2014-2016): Recipient of DOST-ERDT scholarship for Master's students. Full scholarship with monthly stipend.University scholarship recipient (2011-2016): Recipient of Bro. Andrew Gonzalez Academic Scholarship for undergraduate studies. Full scholarship.Published and presented academic papers (2014-2016): One scientific paper published in an IEEE journal (JACIII). Multiple scientific papers (two as first author) regarding quadrotor swarming algorithms accepted and published into IEEE conference proceedings.		
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Languages and Technologies

<ul style="list-style-type: none">Python (proficient), JavaScript, C (Prior Experience in Embedded Applications)Amazon Web Services, Docker, Kubernetes, Scikit-learn, Pandas, Numpy, PyTorch, Keras, Tensorflow, Apache Spark, NLTK, ReactJS		
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