# YasuyukiKATAOKA

Data Scientist


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## Web & Git
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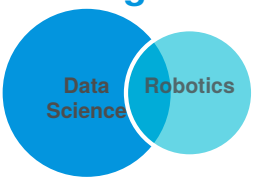
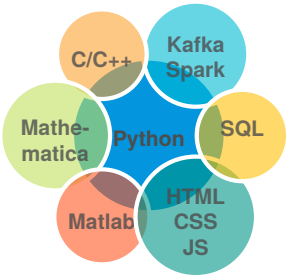
## Background




## Programming




## Languages
**Japanese** ★★★★★
**English** ★★★★★

## Summary


My objective is to create applied machine intelligence for new user experience based on human understanding technology. My specialty is data science and applied Machine Learning engineering on time-series and heterogeneous data such as IoT sensors, natural language, vision and audio data. My background encompasses data science, control engineering and, hacker mentality. At NTT $i^3$, I am leading all the data science projects: customer consultation, product ideation, data collection, analytics, and visualization.


## Experience

09/15 - Now **Data Scientist / Software Engineer** NTT Innovation Institute, Inc., Palo Alto, USA

*Mission*: Applied Machine Learning product/PoC development with customer
- **IndyCar**: 1.wearable data validation (Acc. 99.5%), 2.web UI for actionable insights
- **Tour de France**: 1.rider's power prediction (62.2% error↓), 2.catching the break prediction
- **Customer PoC**: 1. anomaly detection for human security & proactive healthcare,
  2. driver and car telemetry data analytics for car behavior optimization

04/11 - 08/15 **Research Scientist** NTT R&D, Japan

*Mission*: R&D for human understanding and navigation
- **Real-world activity understanding**: 1.the knowledge base of real-world activities using social media & Linked Open Data, 2.service recommendation system using it
- **Barrier free navigation**: 1.barrier free map creation using smartphone data 2.wheel chair navigation system with 15 members team

## Education

Current **Ph.D.** University of Tokyo, School of Eng.
Research on Machine Learning application in human activity understanding

2008-2011 **Master's (Valedictorian)** Tokyo Institude of Technology, Mech. and Control System Eng.
Research on nonlinear control theory to trirotor drone system

2009 **Exchange Program** University of Waterloo, Mechanical and Mechatronics Eng.
Development of self-driving car for Robot Racing'09

2005-2008 **Bachelor's (top 5%)** Tokyo Institude of Technology, Control and System Eng.
Research on experimental study on jumping-motion nonlinear control

## Skills

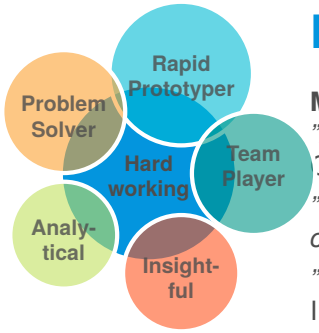
**Programming Language**
python, C++/C, js/html/css, LaTeX, zsh
**Data Science / Visualization**
sklearn, tensorflow, spark, hadoop, kafka, node.js, d3.js, sqoop, hive, bokeh, grafana, mapbox, bootstrap, MySQL, influxDB, MongoDB, SPARQL, HiveQL
**Control / Robotics**
Matlab, MaTX, Mathematica, Maxima, Arduino

## Certifications

02/2018 **Self-Driving Car Engineer** Udacity, 1-year Nanodegree Program
*computer vision, deep learning, estimation, control for self-driving car*

03/2018 **Deep Learning Specialization** Coursera
*deep learning implementation (CNN, RNN)*

## Personal Skills




## OS Preference

MacOS ★★★★★
GNU/Linux ★★★★★
Windows ★★★☆☆

# Publications / Conferences

**Machine Learning**

*"Mining Muscle Use Data for Fatigue Reduction in IndyCar"*, MIT Sloan Sports Analytics Conference 2017 (SSAC'17), Mar.2017

*"Extracting and Evaluating Ontologies of Human Activities from Linked Open Data and Social Media"*, Journal of the Japanese Society of Artificial Intelligence (JSAI), Jan.2016

*"Consumer Device Recommendation Method for web-based distributed browsing"*, The 2013 IEEE International Conference on ConsumerElectronics (ICCE'14), Jan.2014

*"Service Discovery Method basedon User Intent"*, The 2013 IEEE/WIC/ACM International Conference on Web Intelligence (WI'13), Nov.2013

**Robotics**

*"Circle Motion Control of Trirotor UAV via Discrete Output Zeroing Control"*, The 52th IEEE Conference on Decision and Control (CDC'13), Dec.2013

*"Periodic Motion Control for Monorotor type Flying Robot at Non-equilibrium Point via Zero Dynamics Controller"*, IEEE SICE Annual Conference 2011 (SICE'11), Sep.2011

*"Nonlinear Control and Model Analysis of TrirotorUAV Model"*, The 18th International Federation of Automatic Control World Congress (IFAC'11), Aug.2011

**Tech Talks**

*"Real-time machine intelligence in IndyCar and Tour de France"*, Strata Data Conference in New York 2018, Sep.2018 (accepted)

+ more on ykataoka.github.io/publication.html

# Honors & Awards

| | | |
|---|---|---|
| Sep'17 | **JetBlue Award** | Emirates Travel Hackathon, Emirates |
| | *travel cost optimization based on local event detecion* | |
| Mar'17 | **Best MPG Machine Learning Award** | Prius Challenge, Toyota Research Institute |
| | *Data-driven control design(gear, throttle, brake, EV-mode) to maximize mpg* | |
| Dec'16 | **CEO's Annual Recognition** | NTT Innovation Institute, Inc. |
| | *The most recognized employee in 2016 based on overall performance* | |
| Nev'16 | **2nd prize** | Mercedes Benz Hackathon@Silicon Valley |
| | *Battery prediction using IoT data towards smart EV fleet system* | |
| Feb&Mar'16 | **1st prizes** | Mylan Hackathon@Bangalore & @Pittsuburgh |
| | *Two different proactive healthcare PoC using heterogenous data analytics* | |
| Nov'14 | **Excellent Research Award** | SIG Web Intelligence and Interaction Conf. |
| | *Automatic creation of real-world activity knowledge base by social media* | |
| May'14 | **Research Activity Award** | NTT Service Evolution Laboratories |
| | *For contribution in both domestic and international academic community* | |
| Mar'11 | **Valedictorian** | Tokyo Institute of Technology |
| | *at Mechanical and Control System Department* | |
| Dec'10 | **Japanese Delegate to SIYSS 2010** | The Japan Prize Foundation |
| | *Invited to Nobel Prize ceremony, one of the 25 young scientists from the world.* | |
| Mar'09 | **Excellent Student Award** | Tokyo Institute of Technology |
| | *For both course work and research achievement during bachelor's.* | |

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