

# Charles YING

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## EDUCATION

2015–Today	MOOCs, certifications and nanodegrees • EdX, Coursera, Udemy AWS cloud practitioner certification. Reinforcement learning. Machine Learning
2017–2017	Big data specialisation (auditing) • Conservatoire National des Arts et Métiers Document-oriented database, statistics and data mining, Big Data engineering
2011–2013	Electrical Engineering - MSc • University of Illinois at Urbana-Champaign Applied Mathematics, Control, Optimization, Computer Science
2009–2011	Diplôme d'ingénieur - MSc • Ecole Centrale Lille Mechanics, Computer Science, Thermodynamics, Business strategy

## WORK EXPERIENCE

Today 2019	Consultant - Senior Fellow Data Scientist MCKINSEY & COMPANY • Seoul, South Korea <b>Consulted as Lead Data Scientist in multiple industries, on various use cases, from optimisation to machine learning. Led development of internal asset for MIP/OR (data science stream, 4 DS/DE)</b> <ul style="list-style-type: none"><li>• Successfully consulted in data science projects in many different industries (Pharmaceutical, Chemical, Oil&amp;Gas, Agriculture, ...) developing and putting in production various use cases, from predictive to prescriptive solutions.</li><li>• Full Stack competencies. Back-end, front-end, machine learning, databases, cloud solutions... Mainly Python language.</li></ul>
2019 2018	Data Scientist SAFRAN AIRCRAFT ENGINES - DATA LAB • Moissy-Cramayel, France <b>Led the development of predictive maintenance and optimisation algorithms for various business units. Built data-science process and data-driven practices to democratize data-science throughout R&amp;D department</b> <ul style="list-style-type: none"><li>• Optimisation algorithm reduced part rework by 12%</li><li>• Work on predictive maintenance presented in 16th Conference on Condition Monitoring and Asset Management, 2019</li></ul>
2018 2016	Control System Lead Engineer SAFRAN AIRCRAFT ENGINES - CONTROL R&T • Moissy-Cramayel, France <b>Led the Research &amp; Technology team (4 people, X00k€) to design cutting-edge control and fault detection algorithms for future autonomous drone. Drew and executed technology maturation roadmaps – project, planning, fund management</b> <ul style="list-style-type: none"><li>• Fault detection readiness is critical for project continuation. Got approved by client</li><li>• Patent on engine control and fault detection <a href="#">here</a></li></ul>
2016 2014	Control System Engineer SAFRAN AIRCRAFT ENGINES - OPEN ROTOR CONTROL SYSTEM • Moissy-Cramayel, France <b>Designed, implemented and verified (V-cycle) embedded software control logics to operate gas turbine actuators on Open Rotor Demo engine</b> <ul style="list-style-type: none"><li>• Successful regulation of sub-systems in scope during demo test</li></ul>
2013 2011	Research Assistant UNIVERSITY OF ILLINOIS AT URBANA CHAMPAIGN - DECISION & CONTROL LAB • Illinois, USA <b>Tackled implementational challenges of Lyapunov Stability analysis for nonlinear dynamical systems. Designed the concept of Almost Lyapunov Functions and its applicative algorithm</b> <ul style="list-style-type: none"><li>• Published in 53rd IEEE Conference on Decision and Control, 2014</li><li>• Research work followed up with many contributions</li></ul>

## COMPUTER SKILLS

**Algorithms** Supervized learning, deep learning, mixed integer programming, reinforcement learning, optimal and adaptive control, Kalman filters

**Python** Scipy, Scikit Learn, Pandas, Keras, Pytorch, OpenAI Gym, Dash

**Cloud** AWS EC2, RDS, S3, Lambda

**Other** bash, git, svn, Tableau, Docker, SQL

**Product development** MLOps, Agile, SCRUM, technology maturation, impact sizing

**Product management tools** Jira, Confluence, Trello, MS Project, IBM Change, Doors

## LANGUAGES

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FRENCH: Native  
ENGLISH: Bilingual  
CHINESE: Native  
SPANISH: Notions  
KOREAN: Notions

## PERSONAL

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- Personal project cryptocurrency trading bot
- Soccer, Judo, Taekwondo, bike, hiking, go-baduk