

Company/Department	Rockwell Automation/Shanghai Research Center
Internship Program Topic	Machine Learning for Predictive Maintenance
Program Duration	12~24 Weeks
Work Location	Caohejing Hi-Tech Park/Shanghai/China

公司/部门简介

Company/Unit Brief

- 罗克韦尔自动化有限公司是全球最大的自动化和信息化公司之一，致力于帮助客户提高生产力，以及世界可持续发展。罗克韦尔自动化总部位于美国威斯康星州密尔沃基市，在 80 多个国家设有分支机构，现有雇员约 23,000 人。罗克韦尔自动化上海研究中心是一个专门的全球职能部门，致力于应用技术研究以支持公司长期业务战略。
Rockwell Automation, the world's largest company dedicated to industrial automation and information, makes its customers more productive and the world more sustainable. Headquartered in Milwaukee, Wis., Rockwell Automation employs approximately 23,000 people serving customers in more than 80 countries. Shanghai Research Center is a dedicated global corporate function group working on applied technology research projects to support long term company business strategy.

职位概要

Position Summary

- Work on massive data sets captured in a real industrial process or a machine to build a model for specific parameter on-line soft-sensing, predictive maintenance, and control through data mining and machine deep learning approaches.

主要职责

Key Responsibilities

- Do a survey and select a proper machine learning platform, RA internal tools or open source, for the project.
- Inspect and understand the massive data sets captured on a real process or machine under various working conditions; understand the process or machine working mechanism and model related parameters; do data cleansing or reorganization if necessary; identify and realize algorithms, train model, and verify it off-line.
- Perform on-line model verification and validation on the target process or machine; refine the model to improve its accuracy and performance.
- Document the results.

技能/知识/经验/教育要求

Skills/Knowledge/Experience/Education Requirements

- Have data analytics interests and willingness to learn
- Have good skills and experiences of designing and writing programs for data extraction, segmentation and statistical analysis on large datasets using languages such as Python, R, SQL, etc.
- Familiar with one data computing platform, such as Anaconda, Matlab/Simulink, Databricks, etc.

实习收获

Benefits to Student

- Practice the problem-solving methodology to address an issue in industrial field, including industrial process understanding, mathematical theory learning, experiment replication, innovative points identification, solution prototype and final deployment.
- Get a deep understanding on massive data sets collected in a real industrial process or machine instead of “ideal” ones from textbook.
- Understand the state-of-the-art data analytics platforms in industrial automation market.
- Develop software programming competency by using open source tools and implementing extensions. Learn to apply data analytics knowledge and programming skills to process big data sets.
- Get experience of working in a top industrial automation company.