Computer Science | Data Science Graduation Internship: Probability Causality Analysis in Complex Systems

Description

Introduction

Are you a master student looking for your graduation project in industry? Is your study related to Computer Science or Data Science in the engineering domain? Do you have proven experience with Data Analytics? This assignment could be interesting for you!

Background information

ASML has thousands of lithography machines operating 24/7 at chip factories throughout the world. Due to their extreme accuracy, problems with lithography machines occur quite regularly. Downtime in a high-end chip factory is extremely costly: nominal costs for customers can be $20 per second of unscheduled downtime.

Performance problems on these machines are manually diagnosed mainly by constantly measuring (at sample intervals of minutes/hours/days) thousands of signals generated inside the machine. These signals are collected daily for all ASML machines in the field. In the past, this kind of data has mainly been used by human experts.

The ambition is to transition to structural automated monitoring whereby software helps capture the knowledge of the experts to allow generalists to deal with common failure modes. Some parameters are monitored and can give an indication of the likelihood of the cause. However, several parameters can represent an anomaly and one event can be caused by several causes. Therefore, it is necessary to develop a methodology that better covers all these issues and leads to the most probable cause.

Job Benefits

USD 43K – 119K *

Hiring organization
Candidate-1st

Employment Type
Full-time

Beginning of employment
asap

Job Location
Veldhoven, Building 08, Netherlands

Working Hours
40

Base Salary
euro USD 43K - 119K *

Date posted
May 18, 2024