

Disclaimer: Due to the classification of datasets, this position is only available to U.S. Citizens and U.S. Persons (Permanent Residents)

Sr. Data Scientist – Predictive Maintenance

About us

We are the digital accelerator of Raytheon Technologies (RTX), a Fortune 50 company. Our company was born from the merger of United Technologies (an Aerospace conglomerate) and Raytheon (a defense behemoth) in April 2020. The digital accelerator was established in 2017 at United Technologies under the corporate umbrella. We provide digital services to all 4 business units of the new company (Pratt & Whitney, Collins Aerospace, Raytheon Missiles and Defense, Raytheon Intelligence and Space). Although we are part of a 200,000-employee company, the digital accelerator with ~130 employees, operates in a start-up like, agile environment. The teams operate in two offices with the main office in Brooklyn, NY and the second office in Atlanta, GA.

The data science team provides solutions on a wide variety of topic to our stake holders. The team started with general topics of data science but overtime as a response to our business unit needs evolved into becoming the specialists in predictive maintenance of various systems used in commercial and military aerospace.

Position

We are seeking a highly motivated data scientists to join the data science team at the digital accelerator in either Brooklyn, NY or Atlanta, GA. We are looking for people who have a passion for analyzing and uncovering digital insights from large, complex streams of data derived from the worlds most advanced aerospace, and defense systems.

The position is tailored towards a specialist in the domain of predictive maintenance. An ideal candidate has a deep knowledge of data driven models in this field and has experience working with sensors time series data, how to clean and analyze them and how to build predictive models using such data. Depending on the application, models could be anomaly detection or remaining useful life prediction.

As a member of the team, you will work on the research, development, and implementation of complex machine learning systems to predict rare events and faults in aerospace and defense systems.

This position will provide the unique opportunity to operate in a start-up-like environment within a Fortune 50 company. Our digital focus is geared towards releasing the insights inherent RTXs best-in-class products and services. Together we aim to achieve new levels of productivity by changing the way we work and identifying new sources of growth for our customers.

Job Responsibilities include:

- Develop models and algorithms that will improve how we design, manufacture, monitor, and maintain industrial assets such as jet engines and other aviation systems.
- Conduct exploratory data analysis
- Participate in early stage R&D work to further advance the ML platform
- Collaborate with software development to implement and deploy newly developed technologies and algorithms
- Work with business units and lead data scientists to implement real-world critical use cases on the platform
- Build scripts to automate, clean, transform, cross-reference and merge large sources of data utilizing Python
- Results-oriented with a strong sense of ownership in delivering for our customer and businesses

Qualification:

- MSc or PhD in Mechanical, Electrical, Aerospace or Reliability engineering
- 3-5 years of related experience. Relevant graduate research work counts
- Minimum 3 years of experience with Python
- Deep knowledge on at least 2 of the 3: signal processing, time series anomaly detection, prognostics and health management
- Preferred but not required knowledge of reliability engineering data analytics
- Experience with high frequency sensor time series data
- Preferably experience with some but not necessarily all of: time-domain/ frequency domain feature extraction, RNN and LSTM, Markov Chains, Kalman Filtering, Spectral Kurtosis, remaining useful life prediction
- Preferably peer reviewed publications in domains of signal processing and/or PHM
- Excellent written and verbal communication skills along with the ability to well work in cross functional teams
- Experience in stake holder management and communicating results to non-experts.
- Motivated self-starter with a strong enthusiasm to learn
- Ability to deal well with ambiguous and undefined problems