**Modelling Complex System Degradation**

Are you the enthusiastic, talented graduate intern we’re looking for?

Can you predict how a technical system ages based on the loads it experiences? Join the Grooming and Beauty Development team to transform experimental lifetime data into a predictive model of system degradation. Using an advanced automated test platform, you will connect measurable loading conditions, system response and physical degradation. The assignment combines experimentation, data analysis, statistics and mathematical modelling in a real-world engineering setting.

Your Responsibilities

As an intern, you will:

- Take ownership of the assignment, including planning, experimentation, analysis and communication of results.
- Design and execute experiments on an automated test platform.
- Build and structure datasets containing loading, response and degradation measurements.
- Identify the variables and measurable responses that best explain physical degradation.
- Develop and compare statistical, mathematical and physics-informed modelling approaches.
- Incorporate experimental variation and uncertainty into the analysis.
- Validate model predictions using independent experiments.
- Translate the results into practical engineering insights and recommendations.

Key Deliverables

- Experimental plan and a well-structured measurement dataset.
- Analysis of the main drivers and indicators of degradation.
- One or more predictive models linking load, response and degradation.
- Validation strategy and quantitative assessment of model performance.
- Final report including findings, limitations and recommendations.
- Final presentation to stakeholders.

Your background

We prefer students who can start immediately and commit to at least six months,

although exact dates are flexible. To succeed in this role, you should be pursuing a master’s degree in applied mathematics, data science, statistics, system identification, applied physics, mechanical engineering, or a similar field. Additionally, you should bring:

- Fluency in English (written and verbal).
- Interest in predictive modelling, digital twins and experimental design.
- Experience with Python, MATLAB, R or similar analytical tools is a plus.
- Analytical, curious and comfortable working on an open-ended problem.
- Hands-on mentality and a result-driven approach.

You Will Be Part Of

In Drachten you’ll find two of the largest innovation sites of Philips globally. With colleagues from over 35 different nationalities, it is an inspiring international environment for a young talented intern. At Philips Drachten, consumer-product developers work together to create innovative solutions to real-world problems.

Our Offer

Philips Drachten could be the start of a promising career, with opportunities to develop yourself locally or internationally in different parts of our company. At Philips, you contribute to activities that have a positive impact on people around the world. You will also:

- Strengthen your capabilities and knowledge.
- Be guided by a team of experienced professionals.
- Receive an internship allowance.
- Expand your professional network.

If you recognize yourself in this profile and would like to take on this challenge, we invite you to apply!

**For questions about the internship, please contact:**

**Arno Kroezen**

Function Development Engineer