Are you the enthusiastic, talented graduate(s) Biomedical engineering and/or Mechatronics engineering we're looking for?

You will be joining the Innovation Team Oral HealthCare R&D department at Philips Drachten. An impactful multi-disciplinary team of experienced and passionate professionals, that works with internal and external teams from all over the globe. You get the opportunity to work on an innovative method and device for consumer's mouth health detection and its improvement.

Description of assignment

You are asked to enhance the concept to the next level using data obtained to develop the initial proof-of-concept prototype, which may include further research and development in the user interface and experience area. The main goal is to develop a device or system that can improve consumer's oral health with an innovative mouth health detection method.

Main subjects of the assignment:

- Biomedical engineering oriented:
  - Proof the feasibility, capabilities, and limitations of the detection method, both in vitro as in vivo; Now also with human teeth instead of bovine teeth samples.
  - Enhance and define several beneficial user interactions with a device and/or a system which uses the defined detection method.
  - Write the system specifications for the interaction methods defined.
  - Verify the preferred interaction methods with consumers.
- Mechatronics oriented:
  - Define design requirements, specifications and constraints for the product.
  - Ideation of concepts.
  - Design and build test devices and protypes for testing the human interaction and the additional requirements found when testing the concept with real human teeth.
  - Design and build final prototype for the device and/or system to be developed as a product.
  - Those designs will require the application of e.g.:
    Light (LEDs), light sensor systems, optics, CAD design, 3D model making, microcontrollers, electronics, signal processing algorithms for IMU and optical sensors, connectivity. Prototype building possibly with e.g. Python,

embedded python, C/C++, Arduino, ESP, etc.

The exact assignment(s) can be further discussed and defined by the students themselves in collaboration with our team. You are in the lead!
Please note that the subject is highly confidential and requires signing of NDA like contracts. Presentations might need to be adapted in case they are required to be presented to a general audience.

We are looking for:

One (or two) Master/Bachelor graduation student(s) who are pursuing Biomedical engineering and Mechanical engineering or Robotics and who will work on the project for at least 5 months.

To succeed in this role, you have the following skills and experience:

- Affinity with the biomedical and consumer field.
- Professional skills in English (written and verbal).
- Team player, passionate about results and people.
- Hands-on mentality and result driven.
- Likes to do research, execute experiments and make prototypes.
- A solid background in the above-mentioned subjects.
- Students open to learn a lot of new competences, like technical subjects, research, development, consumer research, international cooperation in a large-scale company etc.
- Able to work mainly on site (Drachten) for at least 3-4 days per week.

You will be part of:

In Drachten you’ll find one of the largest innovation sites of Philips globally. With over 2000 colleagues from over 35 different nationalities, it’s an inspiring environment for you as a young talented intern. At Philips Drachten some of the best consumer product developers in the world work together to create innovative products with excellent end-user experience.

Our offer

Philips Drachten could be the start of your promising career, with lots of opportunities to develop yourself locally or internationally in different sectors of our company. At Philips you work for an employer whose activities have a major positive impact on people all over the world. You also get:

- Opportunity to strengthen your capabilities and knowledge.
- Dedicated substantial support and guidance from an experienced supervisor and support from several professionals and departments.
- You will receive an internship allowance.
- Within Philips you get the opportunity to expand your professional network.

Contact

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We are looking forward to receive your CV and a motivational letter containing your ambition as you as you see it now, for at least the coming 3 -5 years.

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Please be advised that applications for this vacancy will reopen in August 2026, as all available student capacity in the Oral HealthCare R&D department has now been fully allocated.