Opportunity for internship M1 M2, at a start-up company, Mikajaki, SA.

Mikajaki is a start-up company based in Geneva and Paris, having an extended network of collaborations with ophthalmological clinics around France. Mikajaki is building multi-ocular robotic ophthalmological diagnosis platform, allowing fully automated scans of eyes using cutting edge optical technologies. We develop models of artificial intelligence, data science, computer-vision and image processing to provide automated diagnosis of eye aberrations based on measurements we collect using our robotic platform.

We are currently seeking a motivated internship student (M1,M2) to join our research and development team and participate in exciting research for the goal of increasing the quality of diagnosis, reduce the risk of vision impairments and loss, hence reducing discomfort caused to patients as a result.

The student will be assigned a project under the supervision of one of our experienced team member, who will provide the necessary tools and knowledge to realize the student’s project. Here we provide a rare opportunity for the student to take part in all steps involved in creating artificial intelligence models in ophthalmology: from data collection, data analysis and cleaning, model construction, feature design and testing, model training, validation, and finally deployment in our robotic platform.

Projects comprise of a mixture of research and development and will focus on one of the following topics:
1. Constructing a machine-learning tool to automatically classify 3D surfaces of the cornea into one of several abnormal types.
2. Constructing a machine-learning classifier to automatically detect aberration in the epithelial cell layer, based on images acquired by OCT
3. Participate in developing a machine-learning model to automatically predict the subjective refraction based on objective measurements, design and test model’s predictions in clinical setting.
4. Participate in the development of model to compute risks of elevated intraocular pressure (glaucoma), the risk of developing abnormal shapes of the cornea (keratoconus) and risk of cornea thinning
5. Participate in developing a model and design experiments to validate prediction of the intraocular power of lenses implanted to replace natural lens in cataract surgery.

Mikajaki’s collaboration with various ophthalmological clinics in Paris and elsewhere in France gives us access to a large volume of data, thus enabling us to successfully train models for both machine-learning and deep learning methodologies. Mikajaki was granted the CNIL’s authorization in France to collect patients data and perform tests in clinics.

Internship duration: up to 6 months.
The student is required to have programming skills in one of the following languages: Matlab, Python, Julia, Java, Go, C/C++
Background in image processing/computer vision is a plus.
Experience with large data is a plus
Experience with any machine learning methodologies is a plus
The student is required to be independent, motivated and with problem-solving attitude.

Applicants can send their CV and/or motivation letter directly to ofir.shukron@mikajaki.com
Please specify in your email: student’s details, school, internship type (M1/M2), and expected date of onset, as well with attaching your CV.