

## MSc Internship project proposal 2025

### “Habit formation and disruption: Insights from 7T MRI”

We are looking for a 6-month intern, for a project starting next year. Please find more information below:

#### Who we are:

Campus Biotech is a Swiss center of excellence in biotechnology and life sciences research focusing on three domains: Neuroscience & Neurotechnology, Digital Health and Global Health.

The Virtual Reality Platform (<https://vr.fcbg.ch/>) at the Fondation Campus Biotech Geneva (FCBG) provides researchers with state-of-the-art equipment and expertise in the field of immersive interaction and motion analysis in virtual reality for experimental research and clinical applications (e.g. cognitive and affective assessment, cognitive and behavioral therapy, neurological rehabilitation, gait and upper limb neuro-prostheses).

The internship will be co-directed by [Arthur Trivier](#) and Dr. [Alison Montagrin](#).

#### Project description:

This project investigates the cognitive and neural mechanisms behind habit formation and how these mechanisms may support mental time travel—the ability to recall past experiences and anticipate future scenarios. Our central hypothesis is that, during the initial stages of learning a task that may become habitual, brain areas like the hippocampus and amygdala are recruited to create early memory traces. As the task becomes automatic, neural engagement shifts to the striatum, promoting routine formation. However, if unexpected events occur, the hippocampus (housing cognitive maps from past experiences) and the amygdala are expected to re-engage, guiding decision-making and goal-directed actions.

#### Project Planning:

1. Research on Eye Tracking in MRI
2. Understand the research subject and develop it
3. At the same time, work with the MRI eye tracking
4. Find and write a guide for the MRI

#### Profile required:

- Knowledge or strong interest in digital technology
- Knowledge of the Unity engine
- Knowledge in 3D design software: Blender
- Mastery of the development language: C#

- Knowledge of versioning tools (Git)
- Excellent communication and teamwork skills
- Excellent autonomy
- Fluency in French (oral and written)

The "Plus":

- Already have an eye tracking work experience
- Already worked with an MRI
- Knowledge in neuroscience
- Fluency in English

The internship is for MSc level students performing their 5/6 months final research project in 2025. The position is full-time at FCBG in Campus Biotech. Ideally, the internship would start between February and May. Small monetary compensation.

Please send your resume and cover letter to [vr@fcbg.ch](mailto:vr@fcbg.ch).

**If you have any visuals to show or project we can browse, don't hesitate to add them as well!  
We look forward to receiving your application.**

The VR Team at FCBG