



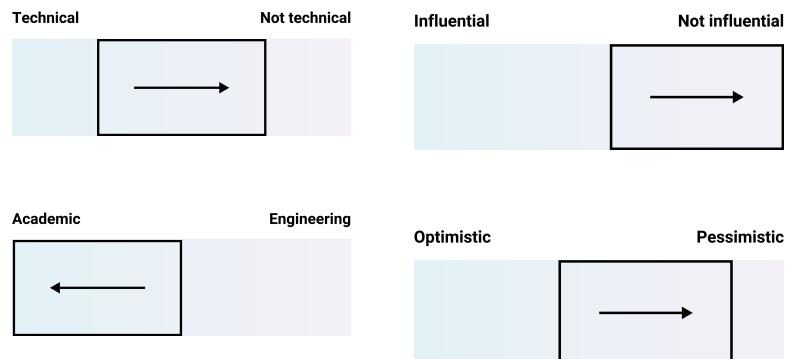
Robbie, the «Lab Operator»

≡ Occupation	Intern, EEG Lab Testing
≡ Tagline	«How can I apply it and how does it work?»
↗ Related to Overview (Column)	
↗ Related to User Story Database (1) (Personas)	<p><u>As a new user I want to be able to set up a new account and receive a message that my account has been created and set up correctly.</u>, <u>As an existing user I would like to log into my account. If I am not registered or if I forget my login credentials, I would like to be registered or have my details recovered.</u>, <u>As a registered user, I would like to see my registration information and if a device is connected to my account.</u>, <u>As a new user, I would like to register my device as soon as possible to get online and start playing around with it.</u>, <u>I would like to get access to raw data and run my experiment setup outside of the platform and sync what is happening in the experiment and the data stream.</u> Sync over LSL. For example <u>PsycoPy</u>, <u>Matlab</u>, <u>Python</u>, <u>OpenVibe</u>., <u>If the impedance is off, I need suggestions on what to do to improve the signal quality.</u> Clean ears, different ear tip size, video explanation - Education module., <u>I would</u></p>

like to check impedance - see the actual value, and know what “good impedance” is for the system as compared to conventional EEG systems I know from the past., As an expert user I would go directly to a live-stream and look at the data: create artifacts and see what they look like and validate that the device is working correctly. I would like to know what was done to the signal, and the scaling of the signal with the ability to change the X axis, test if auto scaling and window size makes sense. Would like to change the default window size, 10 sec, 30 sec, depends on the screen size as well, would like to type in size., As a new user, I would like to register my device as soon as possible to get online and start playing around with it., When logging in, I would like to connect my device if needed to the platform., When logging in, I would like to see the connection status of my device., When my device is connected I would like to see its stats, health and be assured that it is operating correctly., When the device is running I would like to see the streaming data from the device (pre-processed), and processed data (FFT, freq bands),, When the device is running I would like to know that the signal quality is good, and if not I'd like to know what to do to improve it.



Robbie works within a lab and research group, possibly in a large or small organizations, either commercial or academic. Robbie often starts from a study protocol developed with or given by Noel, where a test procedure needs to be followed to have consistent data collection methods with different test subjects. The work of Robbie **supports the assumptions and study endpoints or goals defined by Noel and neuroscience colleagues**. The results may be used in product development or to prepare a research report, white paper, publication, etc. Robbie works hand-on in the lab, knows how to put on a wet-electrode EEG system, looks at raw signals and understand if the data is being collected correctly. Robbie debugs test setups when things are not running correctly, may process results with scripts and is familiar with lab setups like sleep labs. Robbie can also process the study results, put them together for interpretation together with Noel and support technical details that may (but are not often) communicated to Alex.



Overview



IDUN's Impact

- Provide a system that works with minimal setup time so Robbie can spend time on running studies instead of debugging the setup.



Motivations

- Support the testing and development of new technologies.



Goals

- Be able to use our device and software inside a lab environment.
- Run the test protocol on many subjects without issues.



Needs

- Understand how to apply system to a test subject.
- Reliability and know the limitations of the system to fulfill the study protocol.



Expectations

- That our software and hardware works as expected.
- Reliable signal quality once a test is running.



Fears

- Collecting study data and having useless results.
- Starting the study and not pressing the right button to start data collection.
- Device failure for unknown reasons.



Frustrations

- Debugging while setting up experiments.
- No data was recorded.

Background

Experience

- BSc in Physiology, Neuroscience, etc.
- MSc in Neuroscience or Psychology
- Worked as an intern in another R&D group before

Demographics

- 25 years old

Tools/Software

- Matlab (EEGLAB)
- Python (MNE), Jupyter notebooks (simple scripts)
- Lab software (SOMNOmedics)
- MS Suite (Excel, Powerpoint), Origin, Tableau
- PSG systems, EEG full-scalp equipment and software