**ENHANCING AN OPEN-SOURCE BRAIN-COMPUTER INTERFACE SOFTWARE FOR GREATER ADOPTION AND PHYSIOLOGIC DATA SHARING**

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There are high technological and software demands associated with conducting Brain-Computer Interface (BCI) research. BCIs are computer-facilitated systems that rely on direct, real-time measures of brain activity for environmental interaction. In order to accelerate the development and accessibility of BCIs, the parent BCI award (R01DC009834) created an open-source software, BciPy, written in Python and available on GitHub (https://github.com/CAMBI-tech/BciPy). This supplement increases user community engagement and data sharing through enhanced tooling and integration with cloud services to ensure any experimental data collected through our open-source library are readily accessible and adequately curated. Additionally, a unique scientific contribution for this data science supplement is our dataset: physiologic data acquired from people with severe speech and physical impairments (SSPI) secondary to locked in syndrome for use in BCI research. The project allows cloud-based data sharing to achieve the quality recognized by the FAIR (Findable, Accessible, Interoperable, and Reusable) guiding principles for scientific data management and stewardship and will move translational science forward to improve the health and participation potential of patients with severe disabilities.