

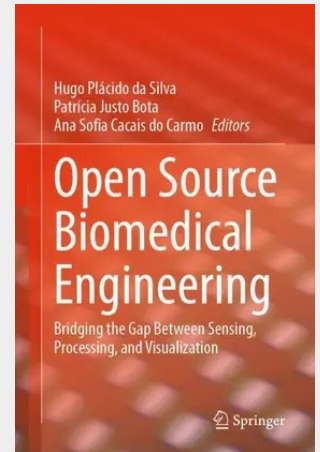
Open Source Biomedical Engineering

Bridging the Gap Between Sensing, Processing, and Visualization

This book provides a practical end-to-end approach to open source technology in biomedical engineering, covering topics that range from hardware and software design to data acquisition, processing tools, and cloud-based storage. Biomedical device conceptualization, design of experimental evaluation studies, and moving from early-stage prototypes to shelve-worthy products benefiting from open source technologies are also covered. The technical chapters are complemented by working examples and address problems that new entrants and professionals encounter when developing work in biomedical engineering, human-computer interaction, physiological computing, psychophysiology, physiotherapy, and related areas. The book is enriched by case studies where open source technologies have been successfully used to accelerate new developments in biomedical engineering. Contributions are rooted in the state-of-the-art and latest advances in hardware platforms, Python for the signal processing and analysis components, and web-based technologies for the user interface components.

- Provides hardware, software, and product design guidelines;
- Includes source code, case studies, and application examples;
- Accessible to a broad audience interested in moving quickly from a biomedical idea to a solution.

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