

# Apoorva Sunil Chakkamallisery

Boston, MA

+16178709425

apoorvasunilc@gmail.com

[LinkedIn](#)

[Github](#)

## EDUCATION

### Boston University

M.Eng. in Biomedical Engineering

College of Engineering Graduate Scholarship, BME Master's Admission Ambassador.

Sept 2025 - Expected May 2026

Boston, USA

### Rangsit University

B.Eng. in Biomedical Engineering

Aug 2019 - July 2023

Pathum Thani, Thailand

## EXPERIENCE

### Grader, Prof. Bela Suki

College of Engineering, Boston University

Jan 2026 - Present

Boston, USA

- Graded assignments for the course BE567 Non Linear systems in Biomedical Engineering.

### Research Assistant

Digital Cognitive Neuroscience Lab: Dr. Maro Machizawa

Aug 2023 - Mar 2025

Tokyo, Japan

- Collaborated with Hiroshima University on Project Moonshot (Aug 2023-Mar 2024) and later with the Institute of Science Tokyo (April 2024-Mar 2025), contributing to multiple ongoing studies under Dr. Maro Machizawa.
- Organized and led the data collection and pre-processing of over 50 EEG data acquisition using dry-electrode headsets, establishing a standardized pipeline that improved data acquisition procedure.
- Processed and analyzed biomedical data such EEG & ECG using MATLAB, Python and EEGLAB, applying signal processing and statistical analysis to extract relevant features for ongoing projects and papers.

### Product Specialist Trainee

Surgical Technology - Aesculap, B Braun Group Ltd.

Jan 2023 - May 2023

Bangkok, Thailand

- Supported operating room workflows during surgical product demonstrations, including instrumentation setup, equipment checks, and case preparations.
- Assisted a product specialist in demonstrating surgical products during multiple events and surgeries at hospitals across Thailand, leading to successful product evaluations and increased product adaptations by surgeons.

## PROJECT

### Improved Methods for Cerebral Spinal Fluid (CSF) management

Sept 2025 - Present

- Executed a multi-phase medical device development project (Discovery-Deployment), completing 50 hours of neurosurgery clinical immersion at Boston Medical Center to identify unmet needs through clinician interviews and direct surgical observation (VoC insights).
- Synthesized clinical and stakeholder input into 12 problem statements and user needs, leading to selection of the final project concept validated through clinical and industry mentor design reviews.
- Executed design control activities by co-developing the PDS and RTM, maintaining traceability across user needs, design inputs/outputs and V&V in alignment with FDA 510(k) and EU MDR requirements.

## PUBLICATION & RESEARCH AWARD

**Mind to Motion: EEG-Based Classification of Motor Imagery and Actual Hand Movements Using LSTM Models, 15th Biomedical Engineering International Conference (BMEiCON), Tokyo, Japan, 2023.** [\[LINK\]](#)

## SKILLS

- Medical Device Development Design:** Medical device development (concept to design), Clinical needs assessment (VOC clinician interviews), Human centered design, Product Mapping, PDS, DHF, Early stage prototyping, CAD (onshape), 3D printing.
- Regulatory, Quality and manufacturing:** ISO, FDA 510 (k), EU MDR, Validation and verification, Manufacturing (DFM), IP, Commercialization, Go-to-market Strategy.
- Engineering Methods and Analysis:** Structured design processes (Waterfall. Agile, Six Sigma, Iterative), Design Thinking (SCAMPER, Morphological analysis), Failure analysis and root cause analysis (5 whys).
- Software, Data analysis and Collaboration:** MATLAB, Python, Github, HTML, CSS, Microsoft Office, SAS studio, SPSS, Figma, Concept selection (Pugh).