GRAVITAS MEDICAL, INC.

Job Description

Position Title: Principal Software & Algorithm Engineer, Clinical Signals

Reports To: CEO

Department: Engineering

Location: In person at 2332 4th St, Berkeley, CA

FLSA Status: Exempt

PURPOSE OF JOB:

Own all Gravitas algorithms and the Entarik Insight clinical decision support software for the Entarik Smart Feeding System, an FDA-cleared, Breakthrough Device-designated sensorized feeding tube and bedside monitor. This includes current algorithms (airway detection, placement guidance, reflux detection) and next-generation work in electrogastrography (EGG), peristalsis, and feeding intolerance prediction. Turn clinical data into practical algorithms that run in firmware, figures and reports that support publications and FDA submissions, and software that ships. This is a hands-on, results-driven role, not a theoretical or infrastructure-building data science role.

RESPONSIBILITIES:

- Own Gravitas algorithms end to end, including design, validation, maintenance, and continuous improvement.
- Develop new algorithms for EGG, peristalsis, and feeding intolerance prediction from clinical study data.
- Organize, clean, and analyze multi-site clinical datasets, including impedance, electrical, and other physiological signals alongside clinical annotations.
- Design algorithms with firmware in mind and partner with firmware engineers to translate them into embedded C.
- Own Entarik Insight end to end, including software development, algorithm content, performance, and supporting documentation.
- Generate analyses, figures, and tables for peer-reviewed publications, conference abstracts, and clinical collaborators.
- Write technical reports, including algorithm descriptions, verification and validation reports, and inputs to FDA submissions.
- Use AI tools to accelerate data analysis and code generation while remaining accountable for correctness.
- Work directly with clinicians, the CEO, and regulatory and engineering staff to prioritize the questions worth answering.

REQUIREMENTS:

- 10–20 years of experience developing signal processing or physiological algorithms, preferably in medical devices.
- B.S. or M.S. in Electrical Engineering, Biomedical Engineering, Computer Science, or related discipline.
- Fluency in Python for data analysis and visualization (e.g. NumPy, SciPy, pandas, matplotlib).
- Working familiarity with C and embedded constraints (e.g. fixed-point math, memory, and compute limits) sufficient to design algorithms that can be implemented in firmware.
- Experience shipping production software, not just analysis scripts.
- Solid grounding in DSP, including filtering, spectral analysis, feature extraction, and detection/classification, with practical use of ML where it adds value.

- Demonstrated ability to distill complex data into clear conclusions, working algorithms, and publishable figures.
- Strong technical writing skills for regulatory, clinical, and peer-review audiences.
- Hands-on use of AI coding and analysis tools in daily work.
- A practical, results-first approach, with a preference for simple tools and fast answers over elaborate data infrastructure.

DESIRABLE SKILLS:

- Experience with GI physiology, EGG, motility, or bioimpedance.
- Experience with FDA-regulated software (e.g. IEC 62304, design controls, 510(k) documentation) or clinical decision support.
- Embedded C development experience.
- Co-authorship on clinical or engineering publications.
- Experience with BLE-connected devices or bedside monitoring systems.
- Experience in a start-up environment wearing multiple hats.

Contact hr@gravitasmedinc.com for more info