

## In search of undergraduate and graduate students interested in medical device product development

**Research Objective:** IV's are a popular access device to provide medicines and nutritional support for over 90% of hospital patients. 250 million IVs are inserted each year in US hospitals with over 50% of these IVs resulting in failures. IV failures can cause severe and irreversible damage when undetected and untreated. There is a need for an affordable and accessible detection method for IV infiltration. DetectIV's solution is an adhesive patch with two mechanisms that provide timely detection for the symptoms of IV infiltration.

**Recruitment Objective:** DetectIV is looking to recruit engineering students interested in research and product development positions to work with our current engineering and clinical team. The team's focus is on developing an inexpensive detection device which monitors for IV infiltration in patients. This would involve working with graduate and undergraduate student engineers across multidisciplinary departments, clinical partners in neonatology and pediatrics at UW Medicine and Seattle Children's hospital, engineering faculty within mechanical and electrical engineering, and product development experts. The team has acquired ~\$200K in funding and have developed a working product that is in route to be commercialized.



**Current Work:** The team is furthering product development design, manufacturability, and creating an active alarm component. The primary responsibilities for this role is to work on prototype advancements, validation testing in bench models, and complete grant milestones to support the existing team's work. This will entail a deep involvement throughout the entire product development process, from design to implementation. **Opportunities in joining this role may include research credit, grant funding for graduate students, filing for a patent, collaborations with product development firms, clinical trial testing, and potential licensures with external organizations/companies.**

### The following are required for the role of a research engineer:

- The applicant should be pursuing a B.S. or M.S. in mechanical, electrical, bio-, materials science, or chemical engineering, or related discipline at the University of Washington.
- The applicant should plan to commit 5-12 hours of work per week towards their duties.
- The applicant should possess strong technical writing and organizational skills, and ability to work with fellow engineers, clinical partners, and business experts.
- Start in Summer 2023 and continue into 2023-2024 school year.

### The following are NOT required to apply to the role, but would be advantageous given the fact that it will be necessary to learn them later on:

- Experience in early prototype development, design iteration, regulatory, and manufacturing
- A basic understanding of peripheral intravenous systems and in-expensive methods that will measure strain, pressure, and fluid amounts
- **If you are interested in the position, please submit a resume and interest inquiry to [kearkath@uw.edu](mailto:kearkath@uw.edu) with the subject DetectIV interest.**