SUCCESS STORY

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Tactile Orthopaedics is transforming orthopaedic surgical training with realistic knee and shoulder learning platforms that replicate the tactile feel of performing surgery. Surgeons, from novice to expert, use these platforms to learn new tools and techniques safely, efficiently and effectively, before operating on a patient.

As a mechanical and biomedical engineering student, Nicole Linares was looking for an internship that combined her passions for mechanical design and its applications in the medical world. Her interests extended to orthopaedic applications of biomedical engineering and an internship at Tactile Orthopaedics encompassed it all.

Nicole is interning in the R&D department at Tactile Orthopaedics. One of the projects she has spent considerable time on is the development of the new Tactile Shoulder. Nicole's contributions included 3D-scanning and modifying the shapes of each bone, 3D-printing the models and creating the final moulds. With Nicole's help, the Tactile Shoulder, along with the Tactile Knee, were used in a worldwide course for sports surgery. Dr. Carolyn Anglin, CSO and Co-Founder of Tactile Orthopaedics, is quick to point out that "WIL funding made it an easy decision to hire Nicole." This is the case with many small companies, as hiring students with the aid of funding often helps to add personnel to projects at a low cost for the company.

Nicole Linares with the Tactile Shoulder

In addition to the development of the Tactile Shoulder, Nicole also worked on the development of a wired light source for Tactile Orthopaedics' portable arthroscope (surgical camera). With guidance from Principal Engineer Danny Zahynacz, Nicole took this project from conceptual design all the way to production. Dr. Anglin points out that the consistently brighter light will positively impact customer satisfaction.

Dr. Anglin is also quick to praise Nicole's work, especially on the light source development: "Nicole completed a thorough analysis of our current and other light sources, recommended a new approach, executed that approach, and designed the housing for the prototype." From Nicole's perspective, she is grateful for the experience, saying, "Seeing the impact my role has on the company has really inspired me because I know the work I do is important to the company and its success. The most exciting part of my role is seeing the medical applications of the Tactile models, specifically seeing surgeons complete procedures on the models I help develop."

Nicole looks forward to continuing her education and creating a strong foundation of skills for mechanical engineering and its biomedical applications. She says, "Tactile Orthopaedics has been an incredible steppingstone to launch my career and has piqued my interests in biomedical innovation and start-up companies."

Dr. Anglin is happy to have Nicole continue her work with Tactile Orthopaedics, noting that the company has gained much from hiring students. Dr. Anglin says, "students play an important role in our company - they are fully integrated into our company and are given relevant responsibilities, under guidance. Students offer us new ideas and new perspectives and have an enthusiasm that adds beautifully to our team."

Tactile's models are used by the orthopaedic industry for in-depth sales and training on new implants and instruments, as well as by universities for detailed resident training. Check out www.tactile-ortho.com to learn more.