



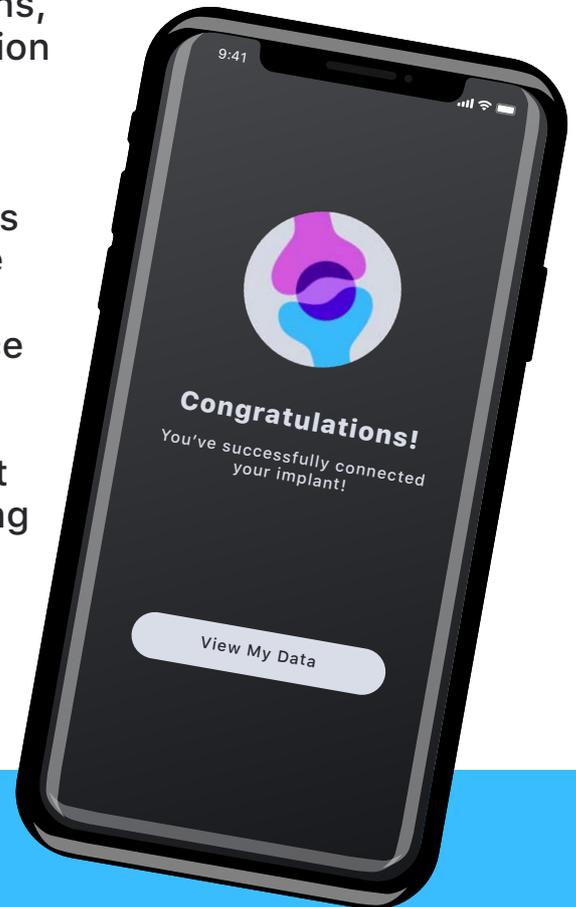
The future of total knee replacement recovery

About OrthoInsight

Because one knee replacement is enough

There were 700,000 total knee replacements performed in the United States in 2017. As baby boomers transition to senior citizens, that number is expected to rise to 3 million by 2030. 6% of these knee replacement surgeries require revision surgery.

The number one cause of knee revision is *mechanical loosening* of the implant. The surgeon's main goal is to secure the implant so that it mimics the natural force distribution in the knee, with **60%** of the force distributed medially, and **40%** laterally. Via wear, tear, and usage - that balance may begin to deteriorate, causing *debilitating* pain and making a revision surgery *unavoidable*.



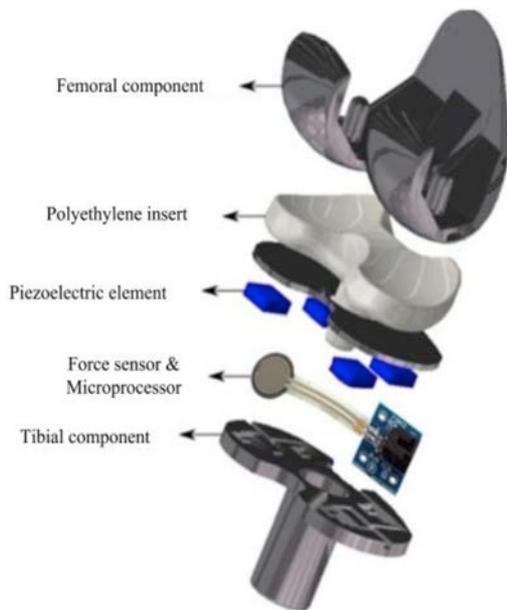
OrthoInsight is the first device of its kind. We've partnered with Johnson & Johnson to integrate a sensor system directly into knee replacements. This system actively measures the force distribution inside of the knee.

OrthoInsight acts as the early warning system for knee replacements by detecting mechanical loosening, enabling preventative maintenance rather than *extensive* and *traumatic* secondary surgeries.

We believe that one knee replacement is enough!

How OrthoInsight Works

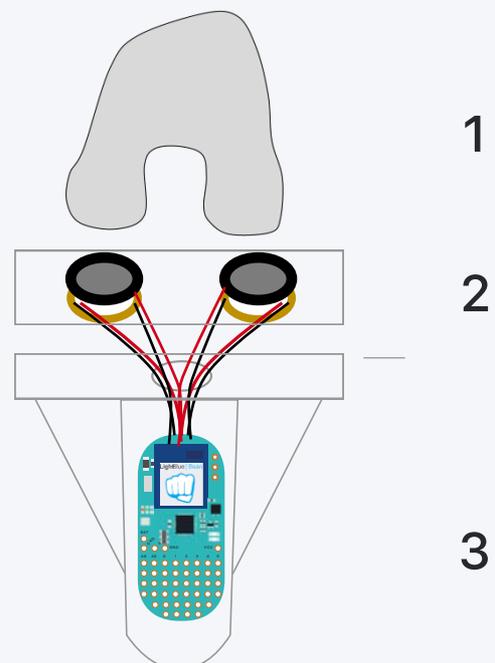
It's the bees knees!



Our technology package is comprised of force sensors, a microprocessor, and piezo-electric components that convert movement into power to charge the system; a system which actively measures the force distribution inside of the knee.

We've located the force sensors above the polyethylene insert to ensure *accurate* force readings from the femoral component. Our piezo-electric components are below the polyethylene insert to *maximize* the movement collected and converted to power. Finally, we've inserted the micro-processor into the tibial component to provide rigid support to *protect* the integrity of the device.

1. Standard femoral component
2. Custom polyethylene spacer
 - Force sensors
 - Piezoelectric disks
3. Custom tibial component
 - Microprocessor
 - Rechargeable battery



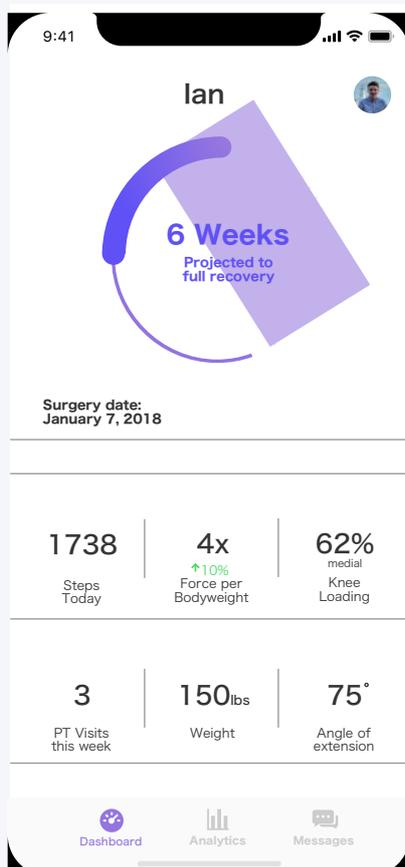
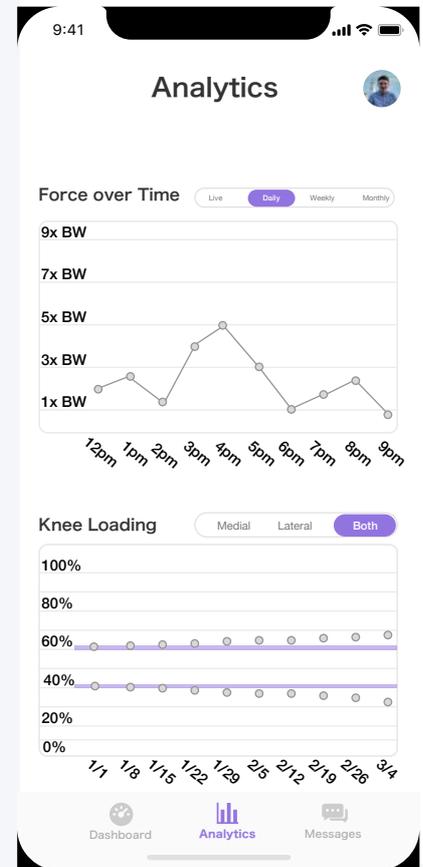


The OrthoInsight App

A solution for everyone

Our web and mobile applications provide robust **visualizations**, empowering surgeons and physical therapists to develop *treatments specifically tailored* to each patient.

For the first time, data such as **force distribution** and **medial-to-lateral loading** can be empirically collected, revolutionizing how patients and healthcare professionals work together after knee replacement surgery.



The OrthoInsight dashboard tracks several KPIs so patients and their care team can conveniently view the **statistics that matter**.

Our dashboard makes it easy for patients to visualize their **road to recovery** — from slow-but-sure increases in step count, to force distribution across the knee, to range of motion.

Meet the Team



Izabela Serowik is OrthoInsight's steadfast leader. She steered the ship through sunshine and storm, guiding the group from milestone to milestone, never backing down from the challenge. Contact her at izabelaserowik@gmail.com

Hashem Selim's middle name may as well be Analytics. He combined his technical prowess with his love for people to create our robust and meaningful visualizations. Contact him at hashem.selim@gmail.com



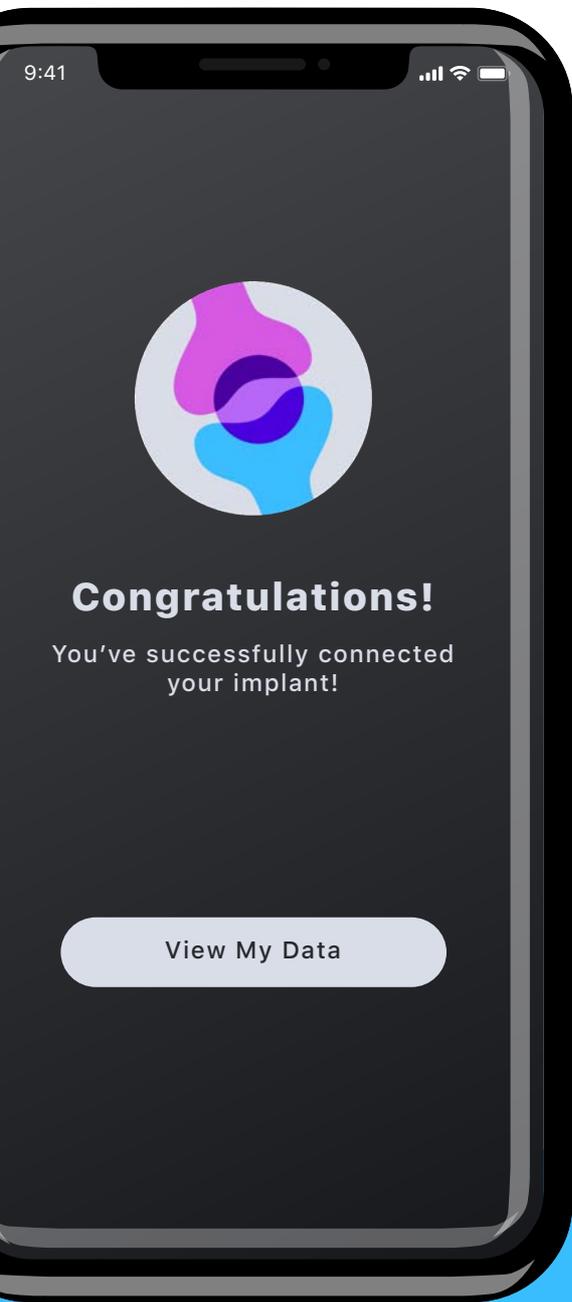
Ian Hipschman is the product guy. Some of his skills include conducting customer interviews, begging smart people to help him bring products to life, and designing UI/UX — and also this pamphlet. Contact him at hipschman.ian@gmail.com

John Mottole wrestles with sensors but always manages to win. His is an app-developing mastermind and was born to manipulate data. Hardware and software don't always get along, but he knows just how to make them talk. Contact him at johnmottole@gmail.com



Ted D'Amico is going to study chiropractic medicine, but not before his tinkering days as an engineer are over. He's our musculoskeletal guy, and his skills include building piezo components and working with emerging tech. Contact him at teddamico1@gmail.com

Looking Forward



Knee replacements are just polyethylene and metal. By adding a layer of complexity, we dramatically increase the value these products provide.

By 2022, the total number of knee replacements in the United States is expected to reach 1.6M. Without OrthoInsight, that would mean 96,000 revision surgeries.

If even 1% of knee replacement patients choose OrthoInsight, Johnson & Johnson will see a revenue of \$1.6M, bringing our revenue upwards of \$160,000 in the first year.

Because one knee replacement is enough.



Watch our trailer!

<https://youtu.be/nS90fwNX8ug>