



Bravo Builders

Meet the Team



Joseph Taylor

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Electrical Engineer



David Lock

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Electrical Engineer



Marlon Sims

Circuit Design Lead
Electrical Engineer



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Communications Lead
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App Development Lead
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Advisors



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Faculty Advisor



Dr. John Ball

Secondary Advisor
Senior Researcher, Athlete Engineering Research Lab

Bradley Johnson



54-year-old retired retail manager

Tight on money, can't afford a personal trainer

Wants to get in shape to play with his two grandkids

Occasionally forgetful

Looking to start a workout routine, but inexperienced

Fig. 1. Adapted from [1]

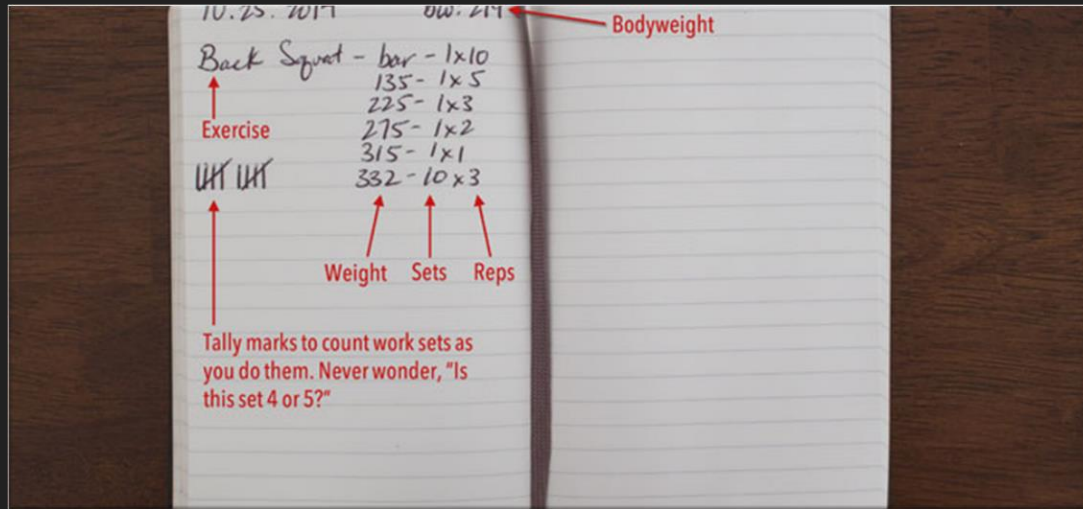


Fig. 3. Adapted from [3]

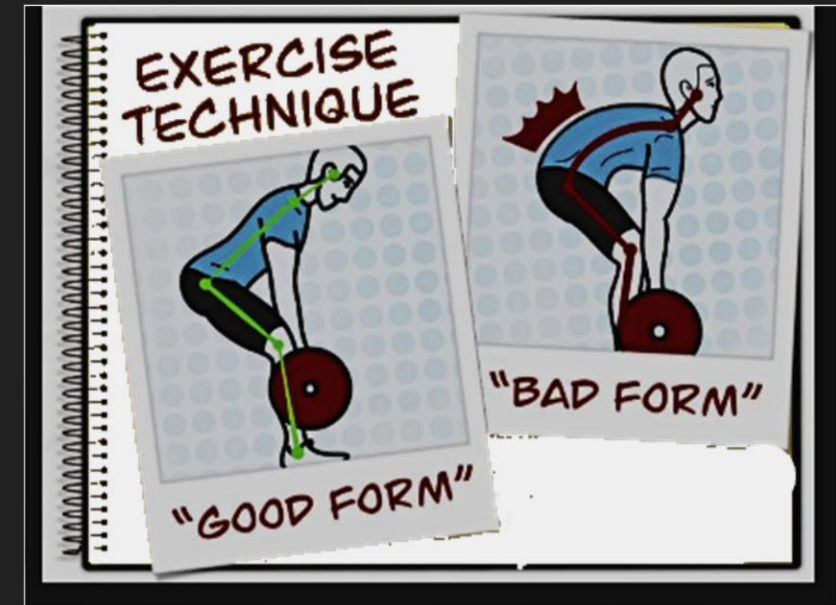


Fig. 2. Adapted from [2]

The Problem

- Newcomer gym anxiety
- Risk of injury (overloading weights, poor form)
- Loss of repetition & set counting
- Uncertainty in exercise choice
- Lack of equipment

Target Audience

Gyms



Fig. 4. Adapted from [4]

Athletics



Fig. 5. Adapted from [5]

The Workout Buddy

An integrated sensor & smart app solution for the Bradleys of the world

- Free weight/machine position & motion tracker
- Intuitive app integration for workout tracking & feedback



Fig. 6. Adapted from [6]

Competitive Advantage

Built-in tracking that would not only log workout reps & sets but also the qualitative attributes of the user's workout

Workout form and technique feedback for improvement

Creation of workout routines to accomplish user-defined goals

Designed to work in tandem with existing fitness trackers for a more well-rounded workout experience



Citations

- [1] Contrastaddict, "A studio portrait of a mature adult.," iStock, <https://www.istockphoto.com/photo/confused-adult-portrait-gm184134257-16768353> (accessed Sep. 5, 2023).
- [2] M. S. N.M.P.T, "Good form vs bad form," Graduate Fitness, <https://graduatefitness.com/good-form-vs-bad-form/> (accessed Sep. 5, 2023).
- [3] James Clear, "Hacking the workout journal: How to track your workouts in the simplest, most effective way possible," James Clear, <https://jamesclear.com/workout-journal> (accessed Sep. 5, 2023).
- [4] Unsplash, "100+ gym wallpapers [HQ]: Download free images on unsplash," 100+ Gym Wallpapers [HQ] | Download Free Images On Unsplash, <https://unsplash.com/s/photos/gym> (accessed Sep. 5, 2023).
- [5] "Athletics information // <![CDATA[_spbbodyonloadfunctionnames.push('setuppagedescriptioncallout'); //]]>," Godley Station School Athletics Information, <https://www.sccpss.com/schools/gss/Pages/Athletics-Information.aspx> (accessed Sep. 5, 2023).
- [6] Bing, <https://www.bing.com/images/create/squat-rack-app-logo/64ef66edea6440af96191250856a6271?id=PoeiWpBuL0JQN0mpc4Ov3g%3D%3D&view=detailv2&idpp=genimg&form=GCRIDP&ajaxhist=0&ajaxserp=0> (accessed Sep. 5, 2023).