

## **C.S. FIELD SESSION**

### ***Advanced Software Engineering***

SomnoHealth Incorporated, a Golden-based consumer health startup, wants *your* help with an interesting "big data" project!

Start here:

[www.GetEverSleep.com](http://www.GetEverSleep.com)

EverSleep brings advanced sleep technologies and customized coaching directly to the consumer - to monitor and improve sleep.

Sleep measurement happens in our new sleep wearable, and that data is BTLE transmitted to our mobile phone app. Inside the app we perform complicated analyses and deliver customized sleep improvement coaching directly to the user.

Our server collects anonymized data every morning from our users and beta testers - 15,000 lines of data per user, per night. *We've got 30,000 nights of data, and more coming in...*

*We need you to build a "Trusted Healthcare Provider Portal" so that providers can "look" into our server and see how their patients are sleeping!*

# Corporate Wellness Portal

We already have a web "portal" (built by a team from CSM!) that lets us "look" into the server and retrieve EverSleep user data. However this portal is not complete, needs some additional features...

We need an improved portal that lets our customers (a local large company or healthcare provider like a chiropractor) view a beautiful web-front end of their employee or patient sleep data. This portal should have good password security, lots of cool reporting, graphs, summary and trending statistics, etc.

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## USE CASE:

A local commercial trucking company has 20 drivers. The trucking industry is notoriously sensitive about sleep apnea. A truck crash kills or injures someone in the US every 14 minutes! About 1/2 of those crashes are fatigue related.

So, the trucking company purchases 20 EverSleep units, and a "subscription" to the portal.

The "subscription" gives them access to your beautiful web viewer - which lets them register each truck driver and automatically downloads (emails?) sleep reports from the server daily.

A summary report is also generated....

"These 10 drivers are doing just fine, these 3 drivers haven't used EverSleep in more than 1 month, and these 5 guys REALLY need to go to the doctor!"

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## Tasks:

- Advanced web graphics, charting, plotting, reporting, etc.
- Outbound email reporting, summary graphics, automated PDF generation, etc.
- User Interface enhancements for individual users and group managers.
- Advanced searching capability
  - ie. Find all men, over 60, with allergies and sleep apnea
- Stretch Goal - Machine Learning! Can you predict which users will get better?

## Schedule:

- Sprint 1: Intro, definitions, access to tools, pick a Project Manager
- Sprint 2: Specific requirements, begin work
- Sprint 3: Implementation, Check-in
- Sprint 4: Implementation, Check-in, Course Correct
- Sprint 5: Implementation, Check-in, Final Update
- Sprint 6: Final Tweaks, Presentation

## Technologies:

- JSON Data
- OAUTH2 & JWT Tokens
- AWS Servers
- JavaScript / Node JS (Current Portal)
- Relational Database (SQL or clone)
- GITLAB Repository
- Agile Tool = Jira
- **See photos and a sample JSON file below!**

## Specifics:

- **Depending on corona virus situation - all work will be via Zoom conference**
- We have a simple "work for hire" agreement to give us ownership to your code. (See CPW)
- No required "work hours". We will have a single 1-hour meeting every week.
- Guidance from senior engineers
- Guidance from other CSM students who we've hired as paid interns
- Potential Internship after the project is over
- If we do meet onsite at our facility... No Dress Code! T-shirt and Flip-Flops are OK
- Team Size 3-6
- *p.s. We're the Fun Team!*

## Contact:

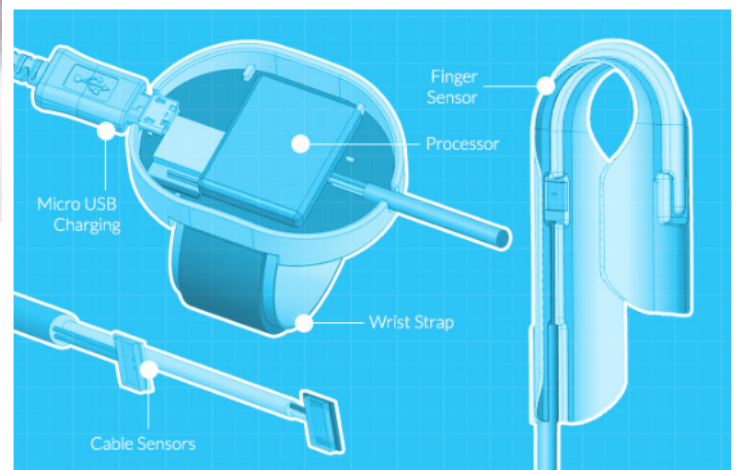
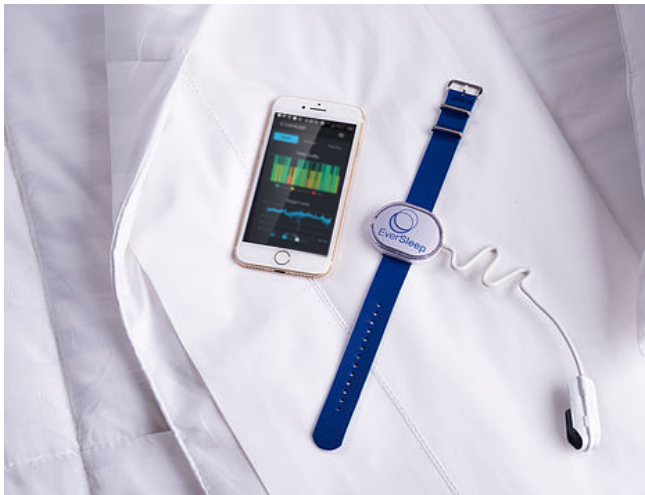
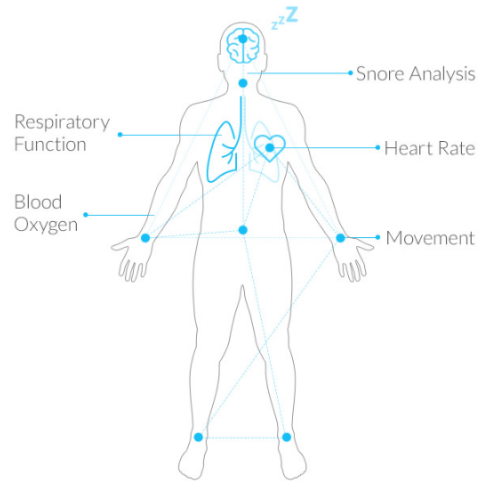
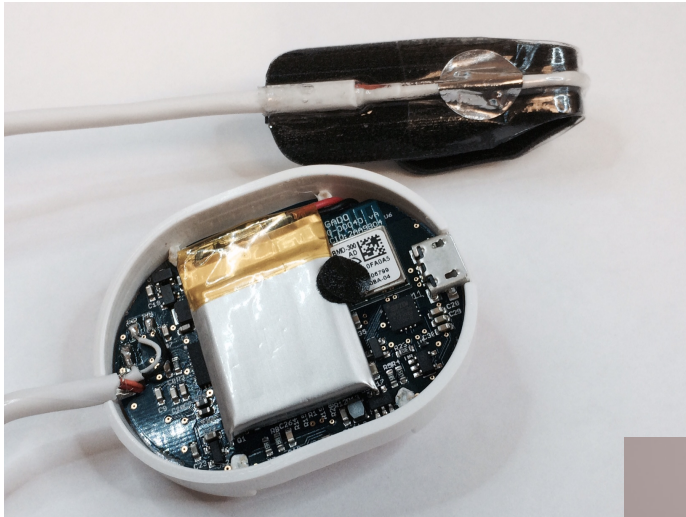
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p.s. If anybody wants to purchase an EverSleep from our website... here is a secret checkout code for employees only! \$25 discount: SAVE25

[www.GetEverSleep.com](http://www.GetEverSleep.com)

# What's Different About EverSleep?

EverSleep uses advanced **sleep-lab technology** to provide the data and coaching you need at home.



```

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