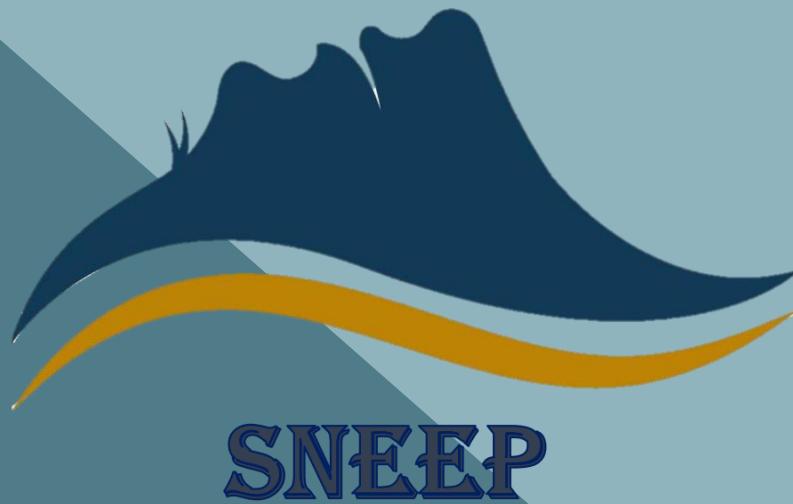
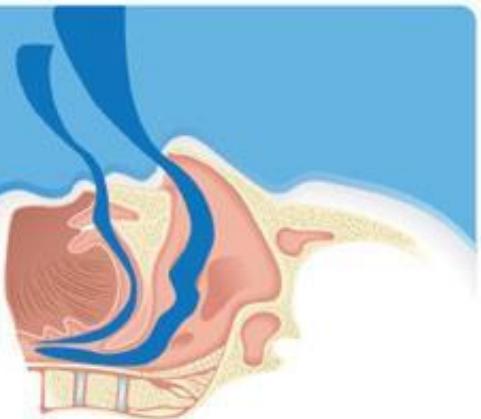


Snug Sleep with **SNEEP**

A diagnostic
&
therapeutic
gadget



Normal Airflow



Wide Airway



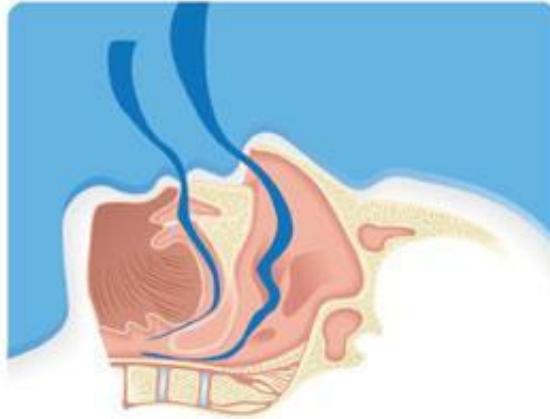
Normal Oxygen



Healthy Heart



Sleep Apnea



Narrowed Airway



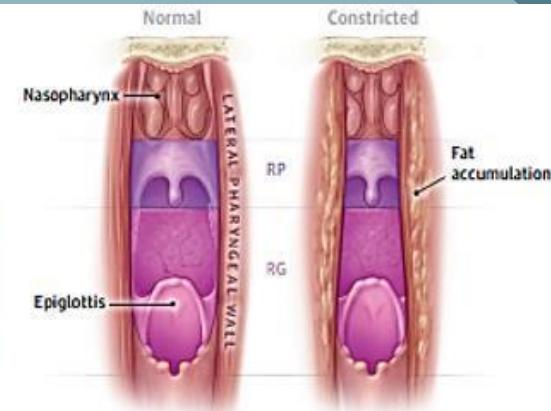
Low Oxygen



Stressed Heart

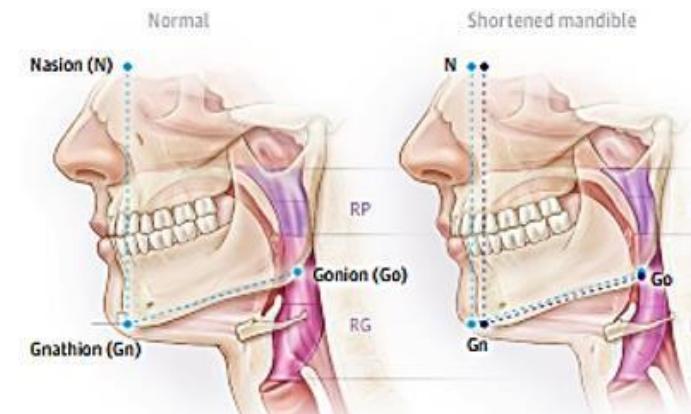
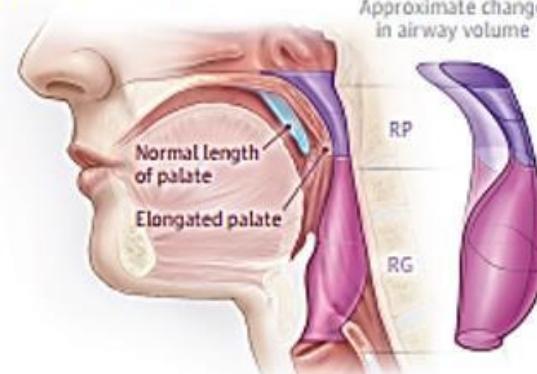


Increased tongue fat and inferior hyoid position

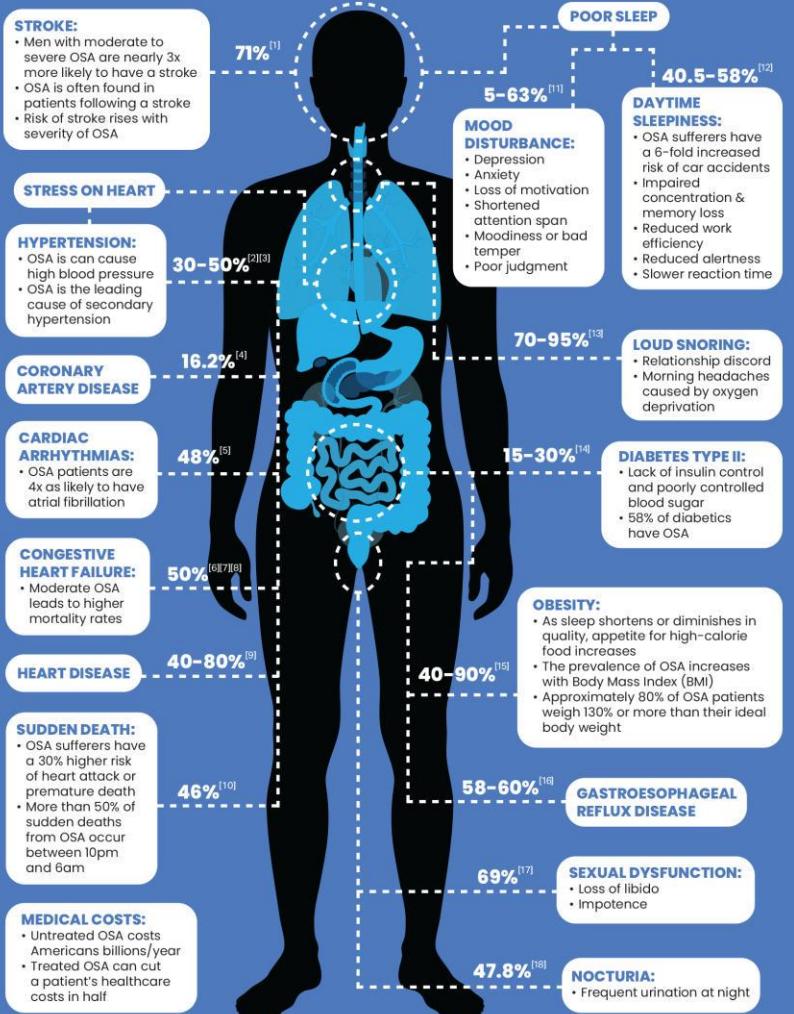


Shortened mandible length

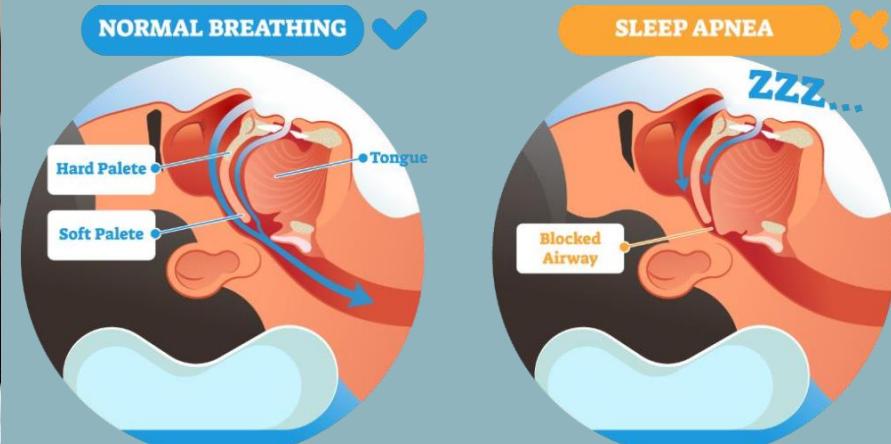
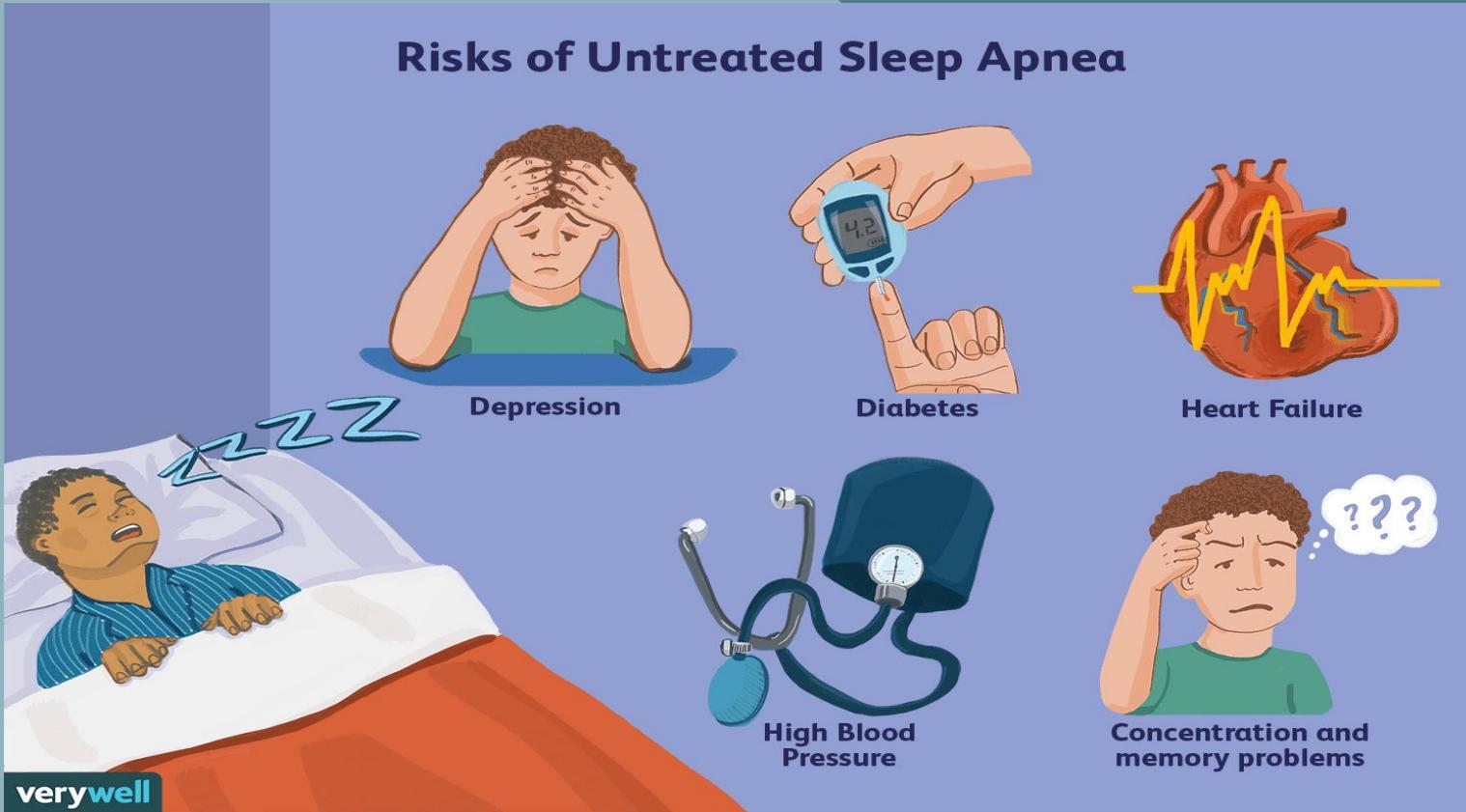
Elongated soft palate



THE CONSEQUENCES OF OBSTRUCTIVE SLEEP APNEA (OSA)



Risks of Untreated Sleep Apnea





Problem

Obstructive sleep apnea (OSA) is a disease that characterized by episodes of complete collapse of the airway or partial collapse with an associated decrease in oxygen saturation or arousal from sleep.

Prevalence:

In our country, on average, 1 person out of every 4 men and 1 person out of every 10 women are suffering from this disease, which in some countries reaches 50%.

Risk Factors:

Age

Male gender

Smoking and alcohol use

Weight

underlying diseases

Sleeping pills and sedatives

Acetazolamide and theophyllines , etc

Primary Complications:

Excessive fatigue during the day

Morning headaches

Forgetfulness and difficulty concentrating

Mood problems

Sexual problems

Frequent urination

Snoring and night sweats

Secondary Complications:

Heart failure

high blood pressure diabetes

Heart attack and stroke Alzheimer depression

Economic Burden:

The economic burden of undiagnosed obstructive sleep apnea in the United States is over 150 billion dollars. This cost is related to productivity reduction, complications caused by this disease on physical and mental health, and road accidents caused by sleepiness, so that 25% of accidents in Europe are related to this disease.

Effective treatment can prevent 40,000 accidents per year.



Primary Objectives:

- Early detection of obstructive sleep apnea
- Monitoring the severity, depth, and duration of respiratory interruptions during sleep
- Reducing diagnosis and treatment costs
- Preventing secondary complications such as cardiovascular diseases, stroke, depression, and road accidents
- Utilizing artificial intelligence to analyze respiratory data
- Enabling remote interaction between patients and physicians through telemedicine



Project Scope:

In-Scope:

1. Wearable respiratory monitoring device
2. Patient mobile application
3. Physician web-based dashboard
4. Data collection from acoustic, mechanical, thermal, and pulse oximeter sensors
5. Visualization of sleep and breathing graphs
6. Emergency alert system in critical conditions
7. AI-based analysis and apnea detection

Out of Scope:

1. Mass production of hardware
2. Medical treatment or drug prescription
3. Clinical decision-making beyond diagnostic support

System Requirements:

Functional Requirements

- User registration and authentication
- Collection of respiratory and physiological data during sleep
- Analysis of collected data to detect obstructive sleep apnea
- Visualization of apnea severity and sleep patterns using charts
- Real-time alerts in emergency situations
- Secure data transmission to the physician's system
- Storage and management of patient medical history
- Generation of diagnostic reports for physicians

System Requirements:

Non-Functional Requirements

- High diagnostic accuracy
- Acceptable processing speed and system responsiveness
- User-friendly and intuitive user interface
- High system reliability and availability
- Data privacy and security compliance
- Scalability for future expansion
- Accessibility for general users

خبرگزاری تسنیم

مراجعةه روزانه ۳۵۰۰۰ بیمار تنفسی به بیمارستان‌ها / بیماران مبتلا به آنفلوآنزا هستند

۱۴ آبان ۱۴۰۱ - ۰۹:۱۹ | اخبار اجتماعی | اخبار پزشکی |

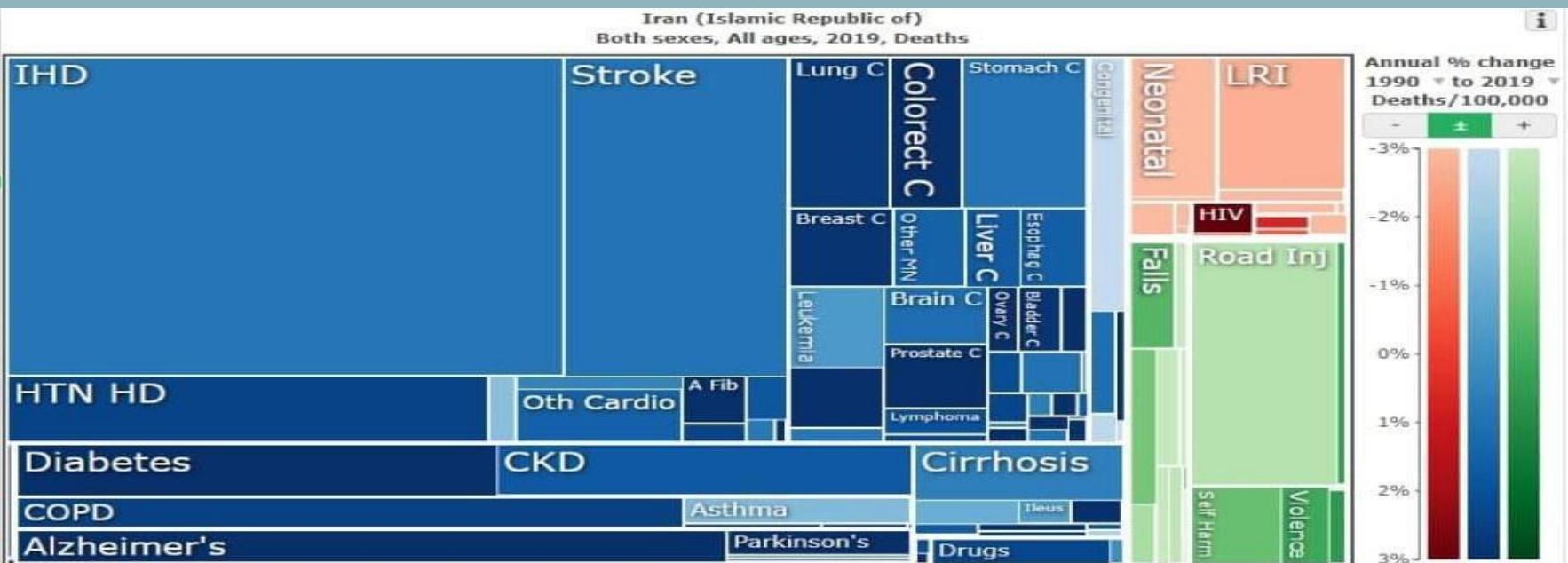


statistics

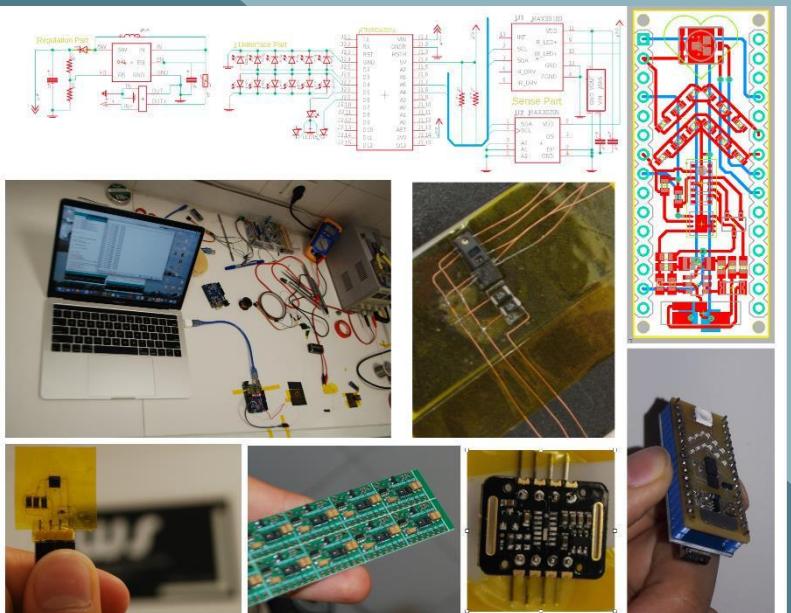
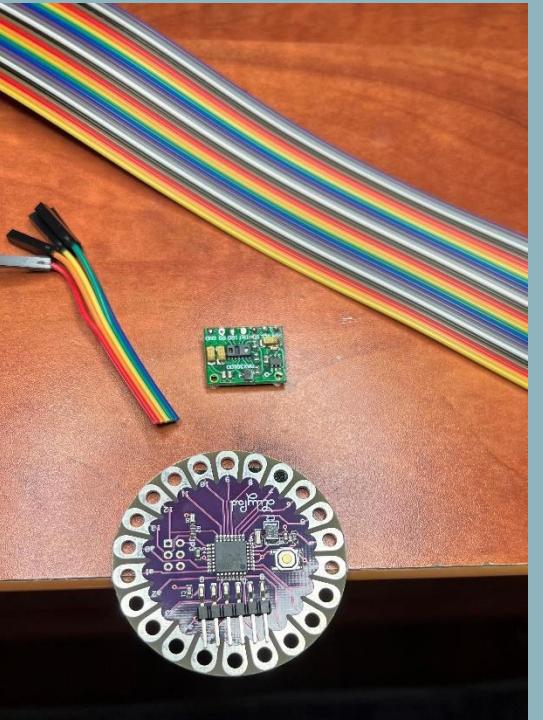


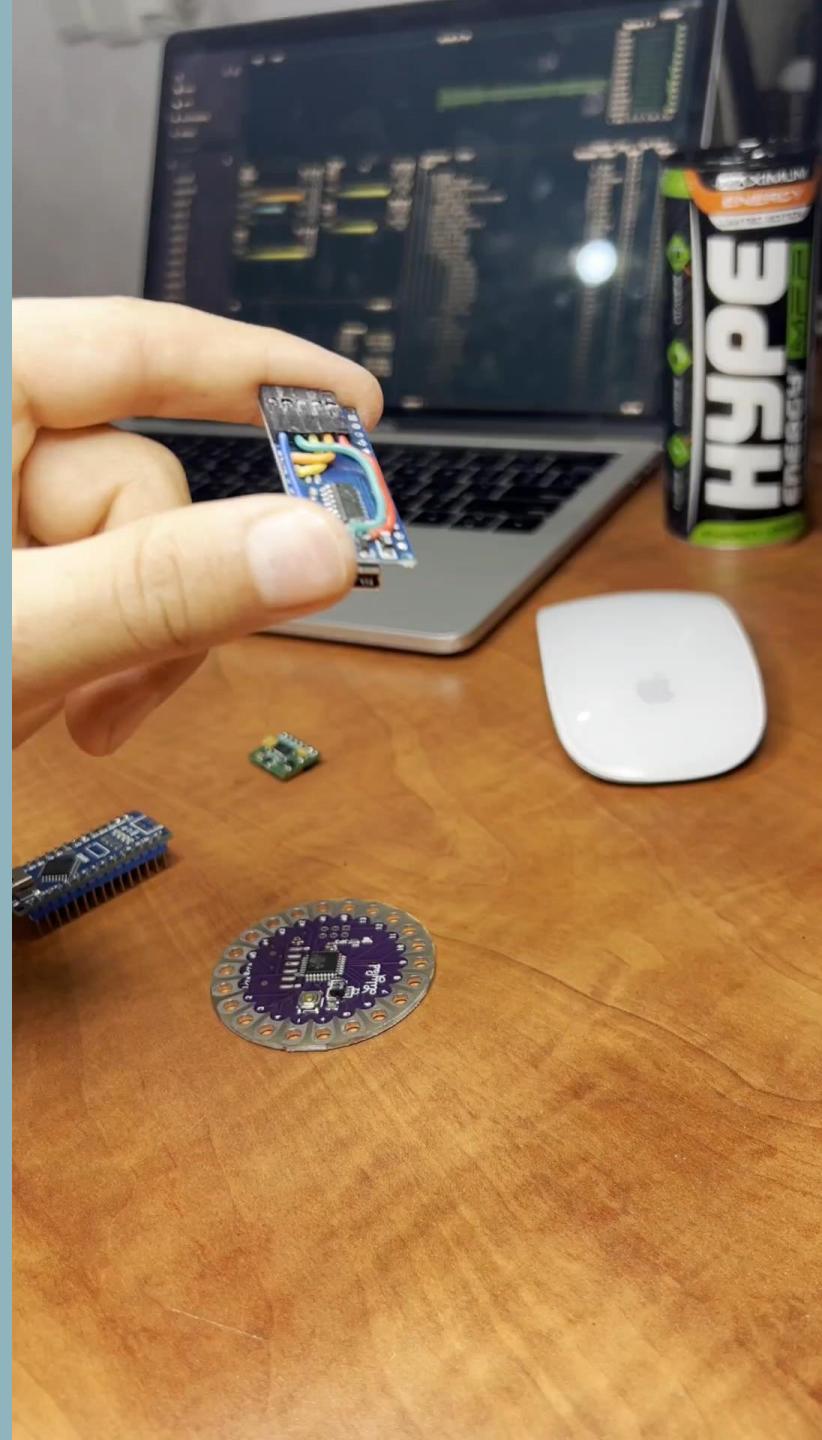
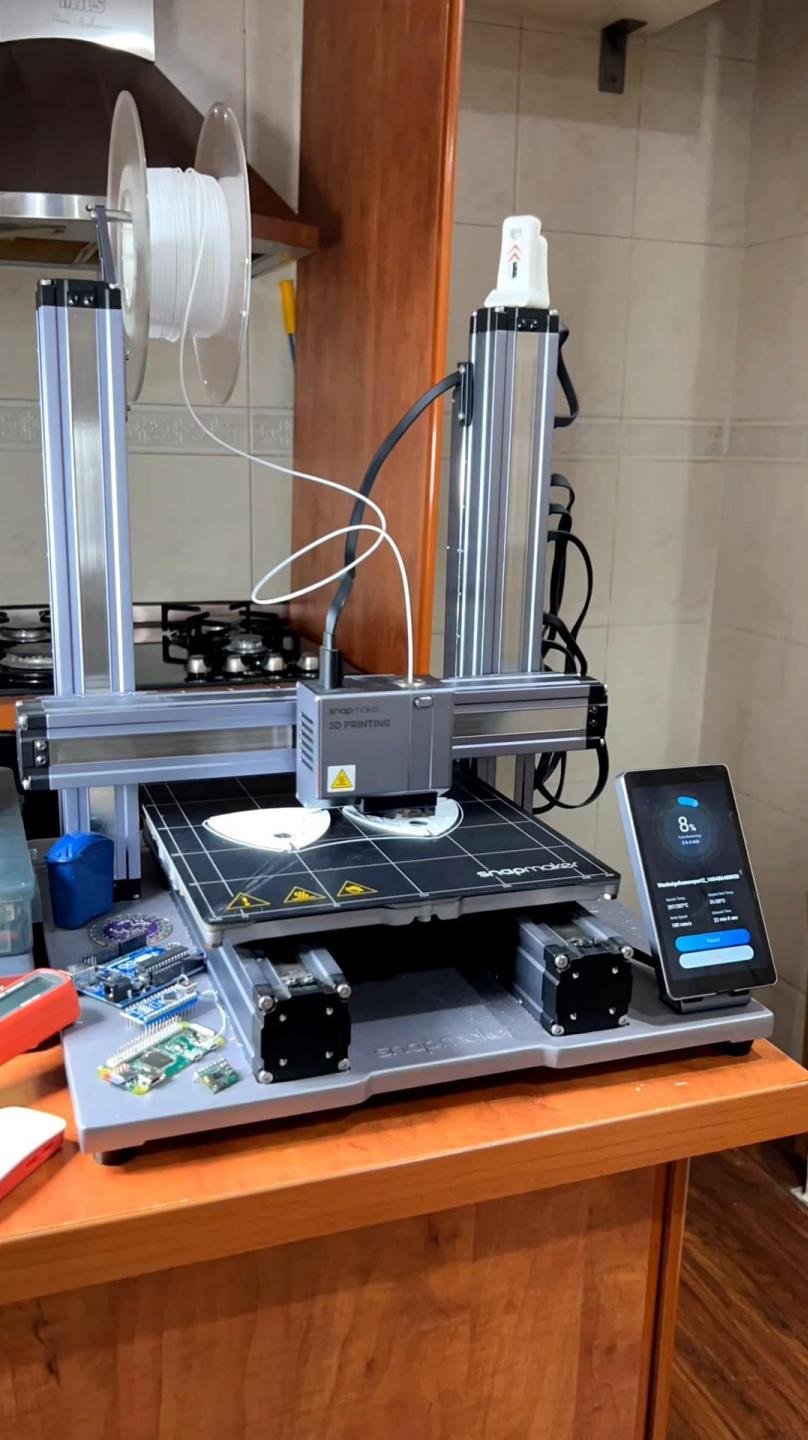
۸۵ درصد مبتلایان به آپنه خواب از بیماری خود مطلع نیستند

سلیمان محمدی: براساس آخرین آمار ۴۰ درصد تصادفات در سطح جاده‌های کشور به دلیل خستگی و خواب‌آلودگی رانندگان رخ می‌دهد.



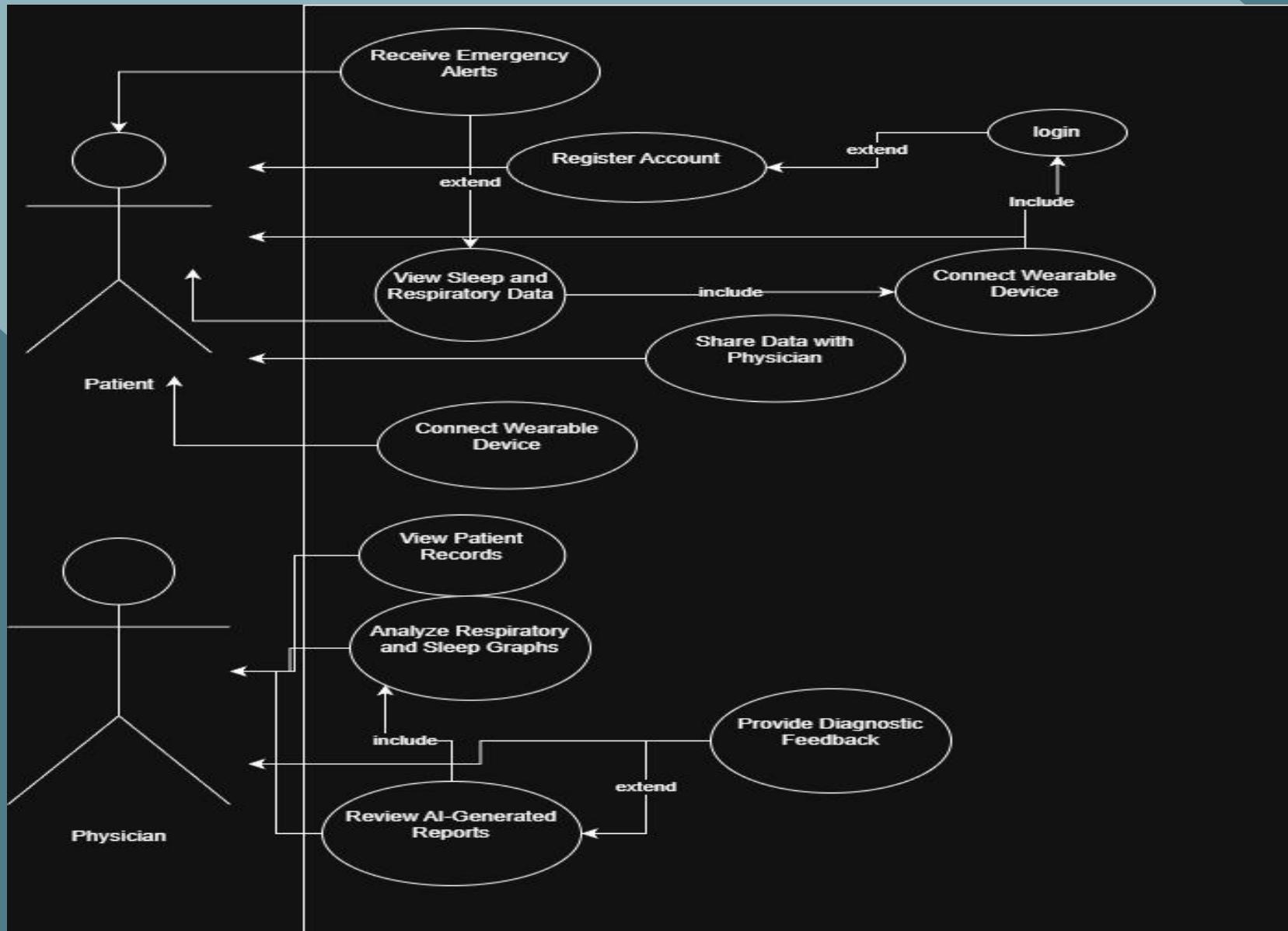
MVP



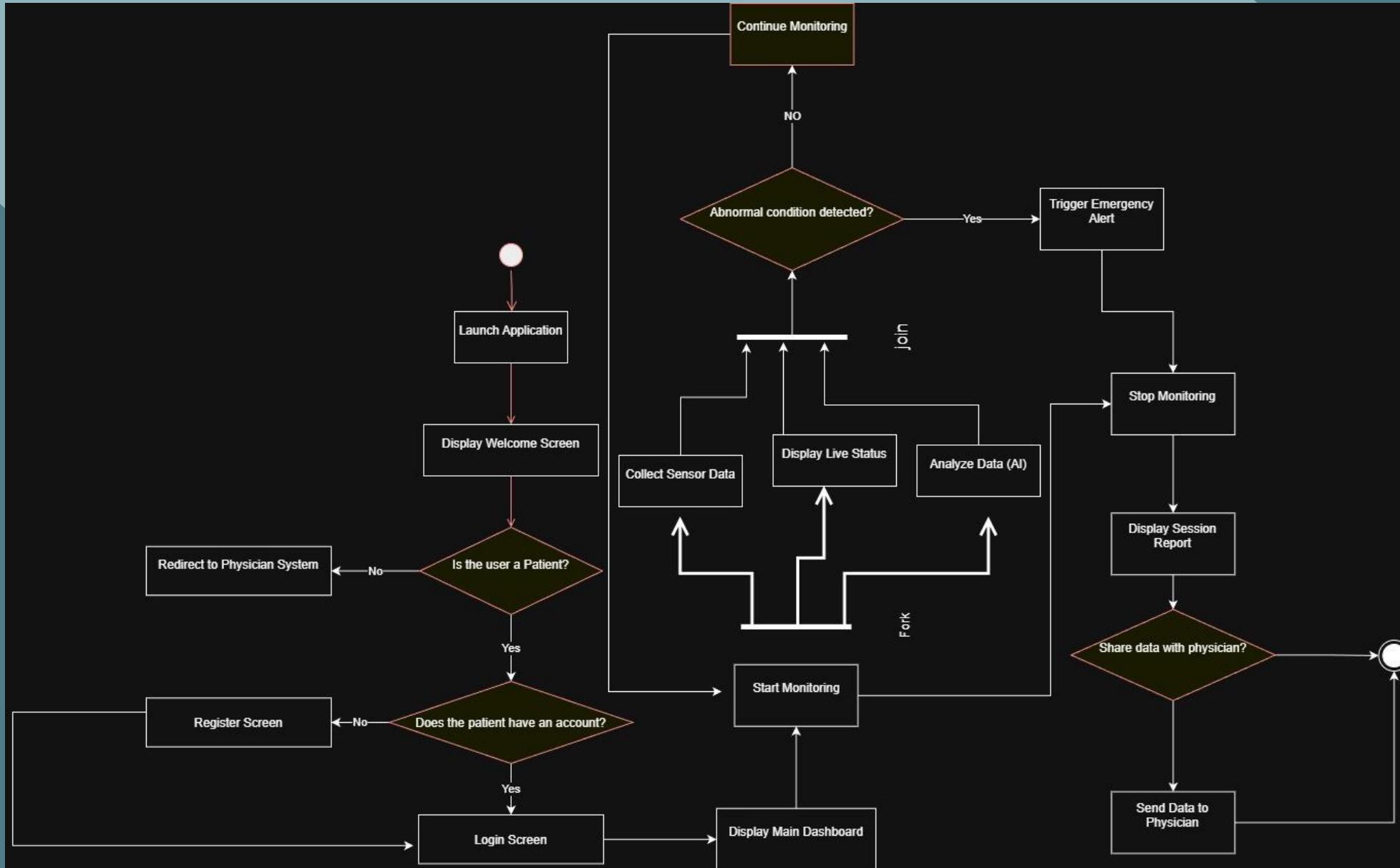


UML Diagrams

Use Case Diagram



Activity Diagram



Wire Frames

Snug Sleep With Sneep

ورود بیماران 

ورود پزشکان 

درباره ما

Sneep درباره

Snug Sleep With
Sneep



پروفایل شما



اتصال

شروع



ارتباط با پزشک



ارتباط با پشتیبانی