

Hacking HeartCare



Nicolas Sheppard-Jones | **Physician**

Shadi Ramadan | **Software developer**

Adam Boura | **Biomedical engineer**

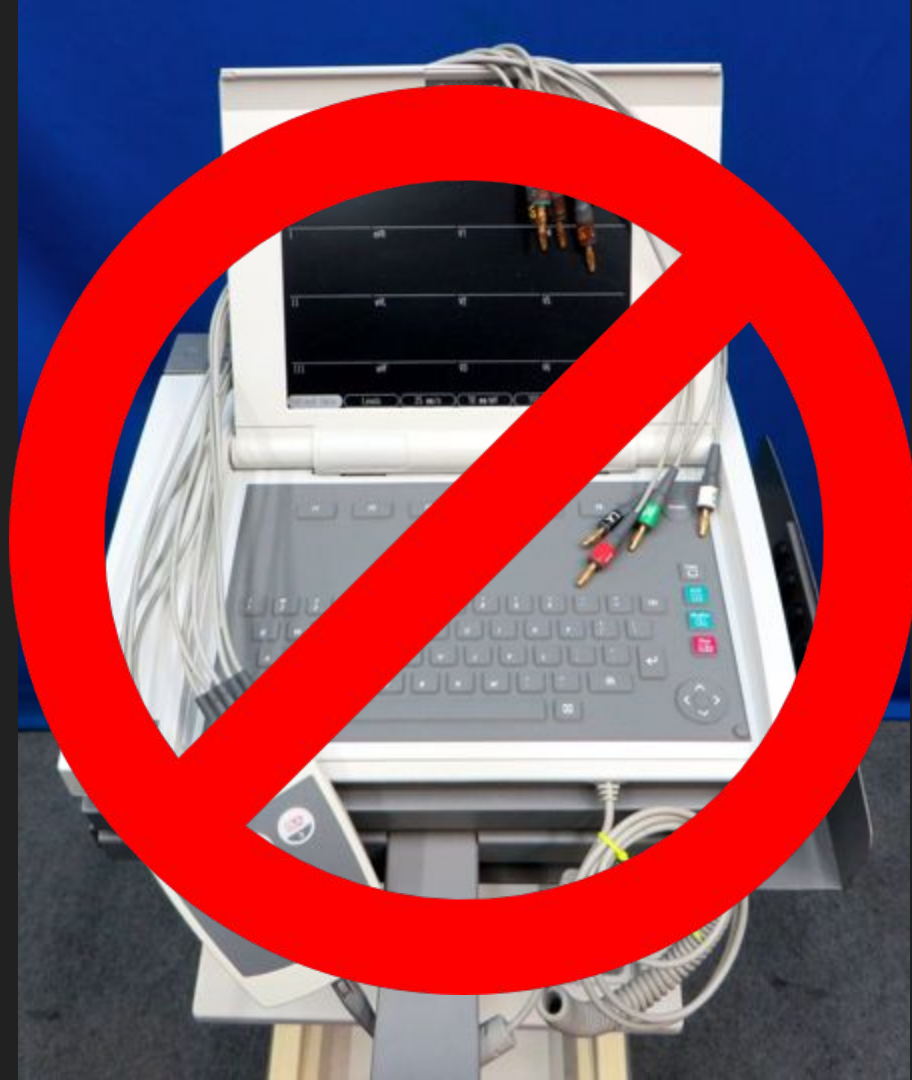
Sebastien Tremblay | **Brain Scientist**

Joshua Surette | **Software engineer**

Victor Mutai | **Data scientist**



Centro de Salud Santa Clotilde, Peru





ECG machines are expensive.

\$2000



Total cost of materials
and assembly in USA
per unit

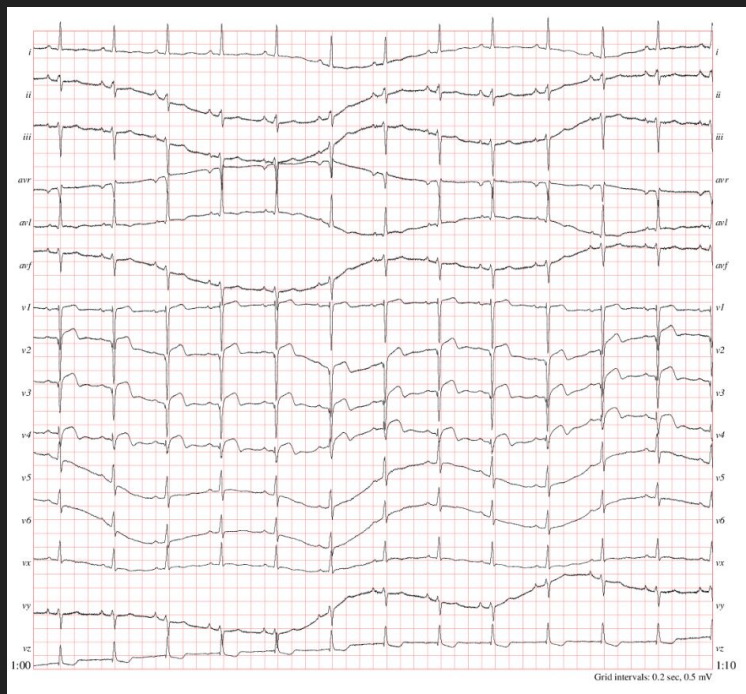
\$36

Access to physicians is limited.

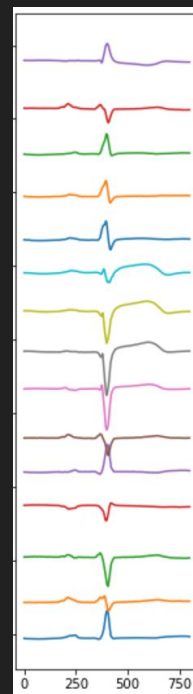


AI Diagnosis

Noisy ECG data

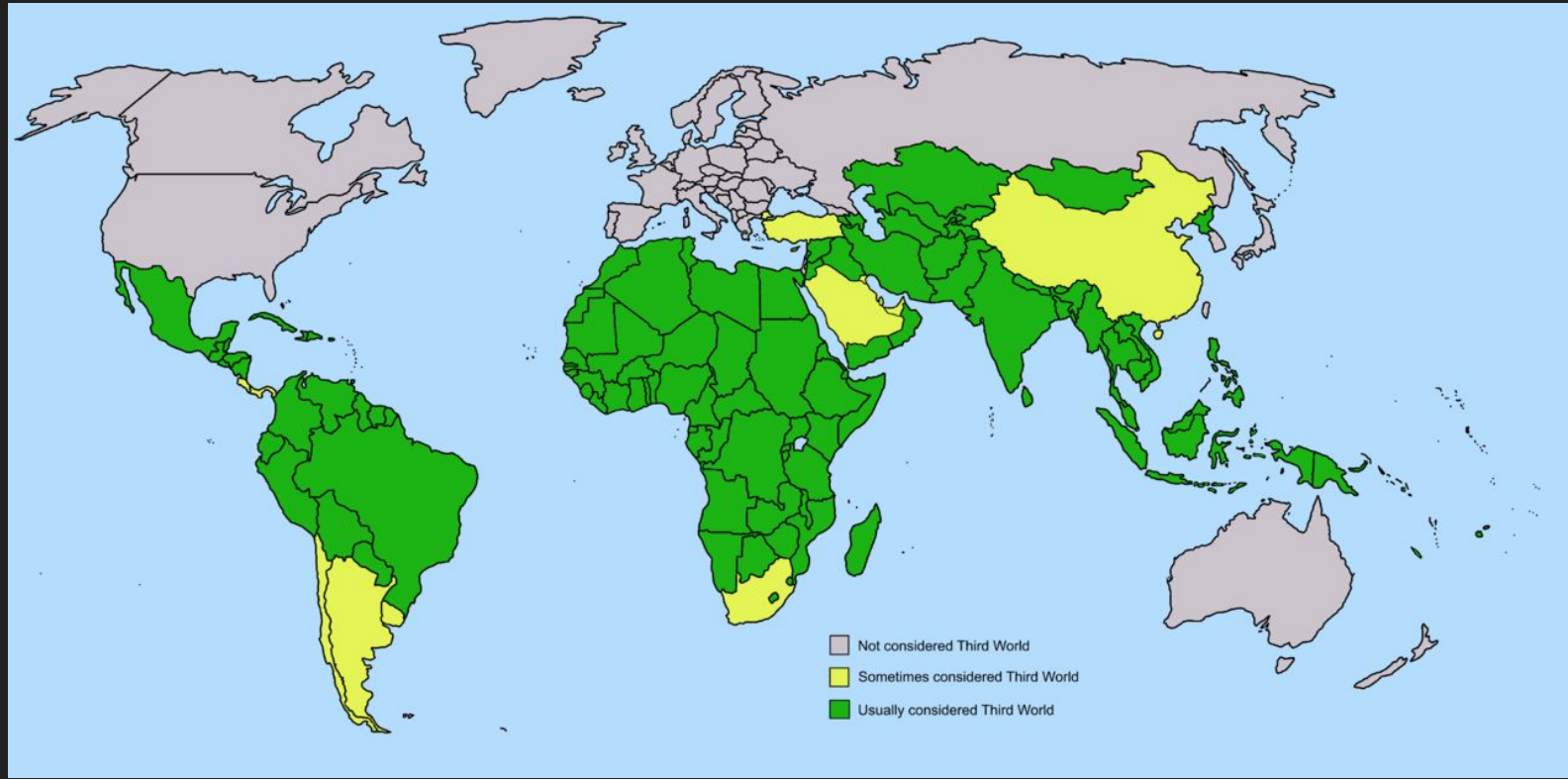


Processed



1. Denoising
2. Compressing
3. *AI*-learning ready

Market: Developing world



> 3 billion people

Kisii county - Kenya



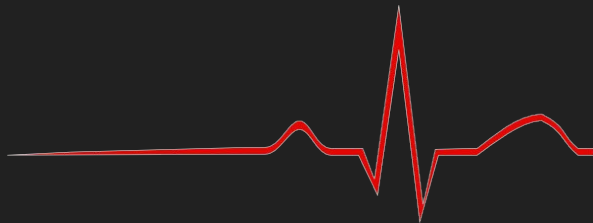
1.5 million people

15 physicians

0 ECG machines

Heartcare for everyone

Hacking HeartCare



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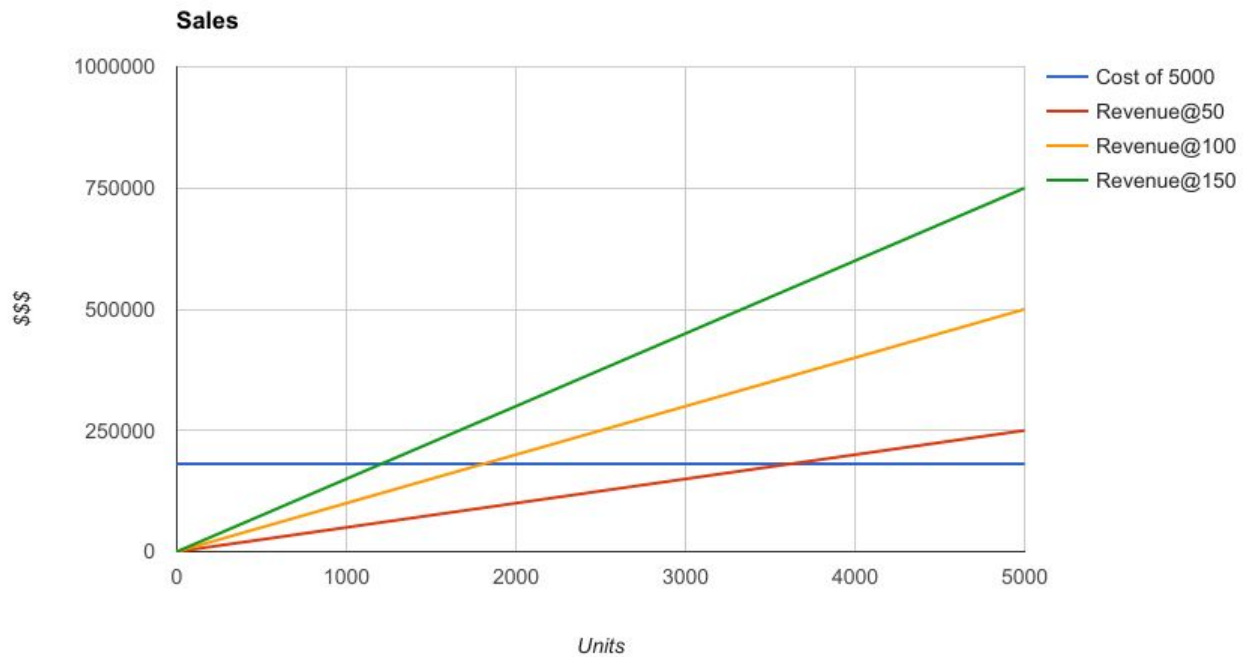
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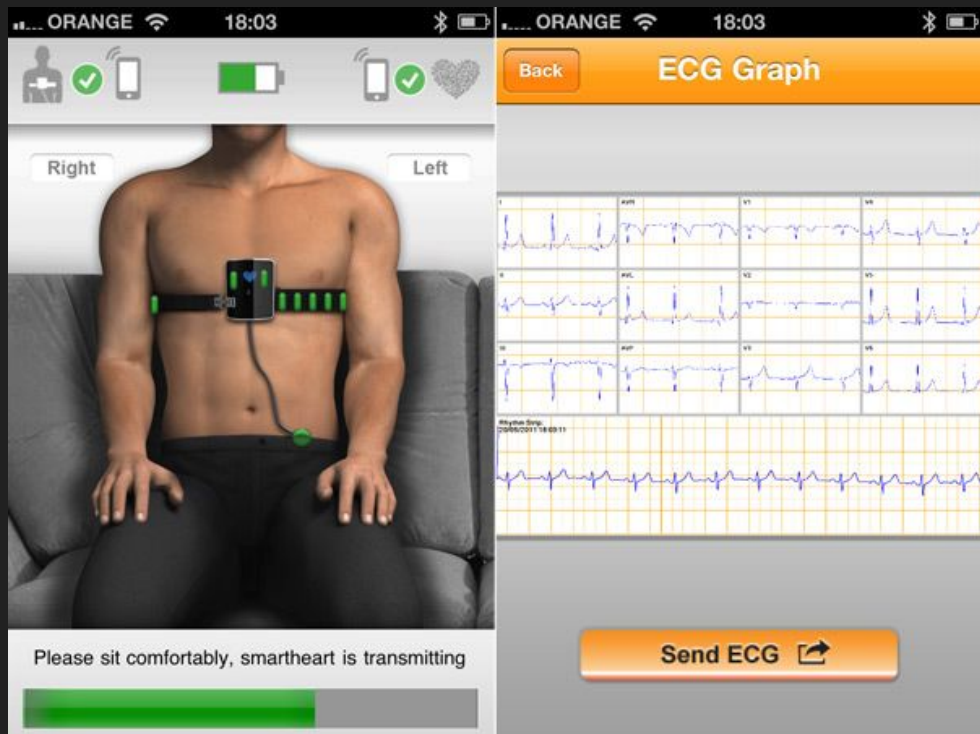
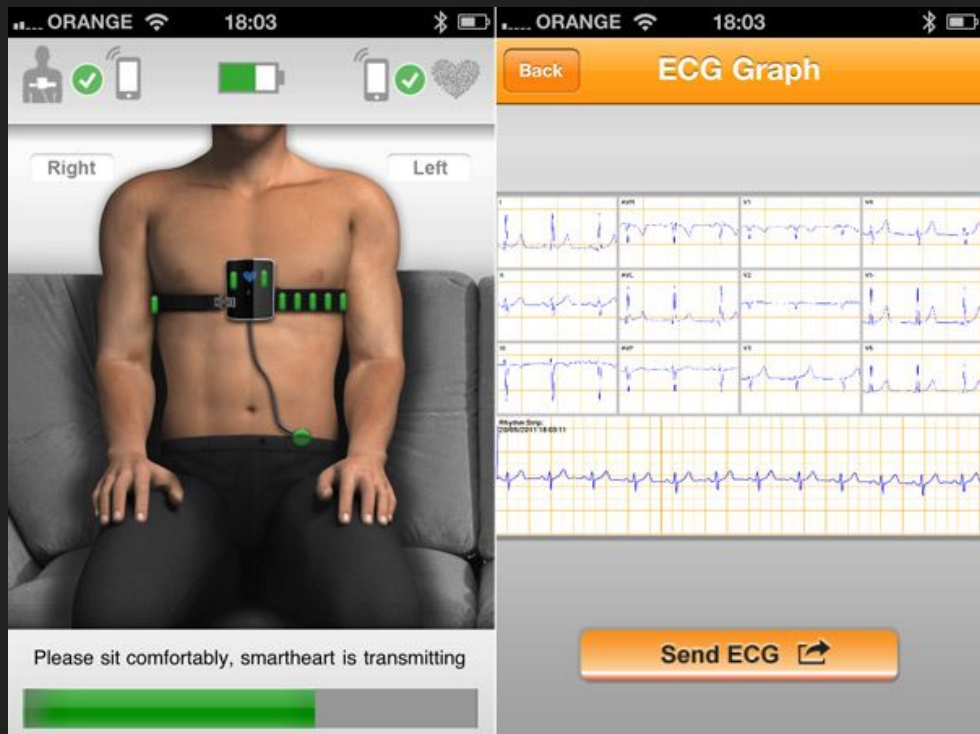
Joshua Surette | **Software engineer** surettej@bu.edu

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Supplementary material

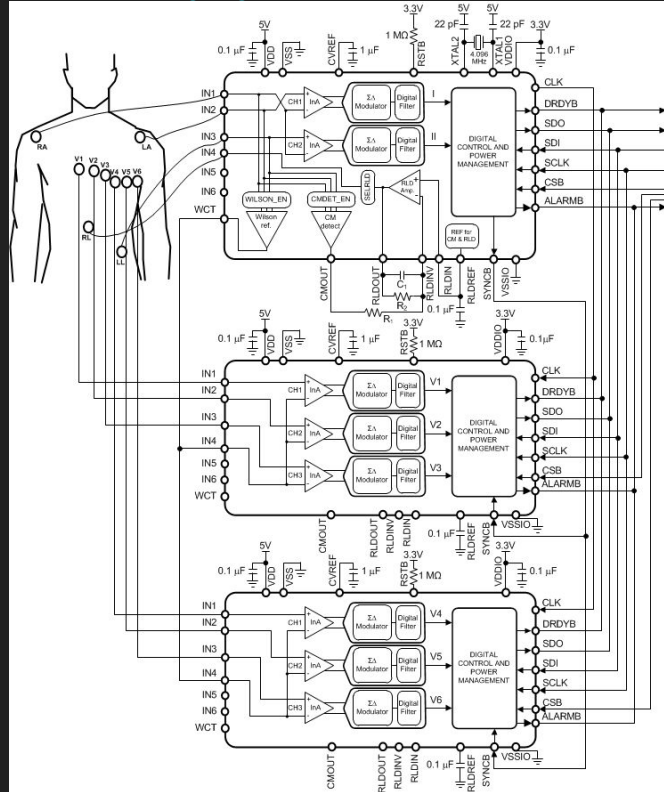


Existing solutions?

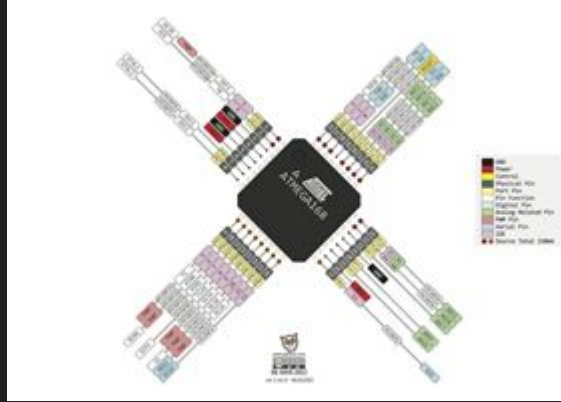


http://www.ti.com/product/ADS1293/datasheet/application_and_implementation

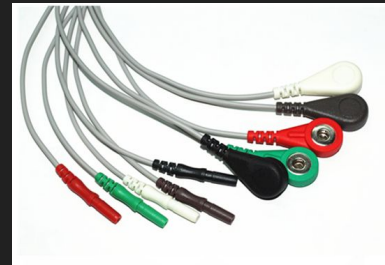
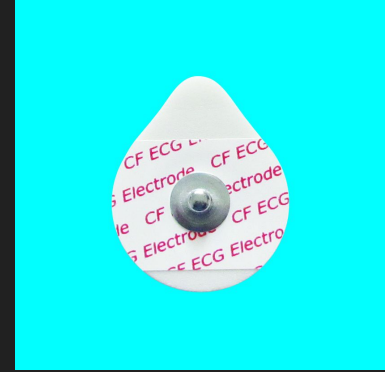
<https://docs.google.com/spreadsheets/d/1WxtniOVDgTrSs2g6eavaUHVGDfRcewmLFTYKFjvP1Y/edit?usp=sharing>



Courtesy Texas Instruments



Courtesy Atmel



Machine Learning Algorithm

