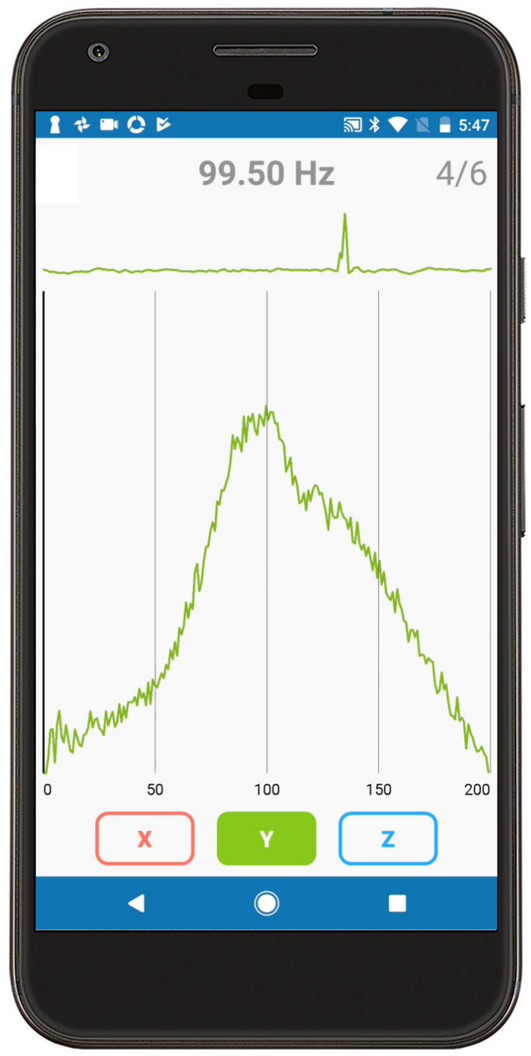
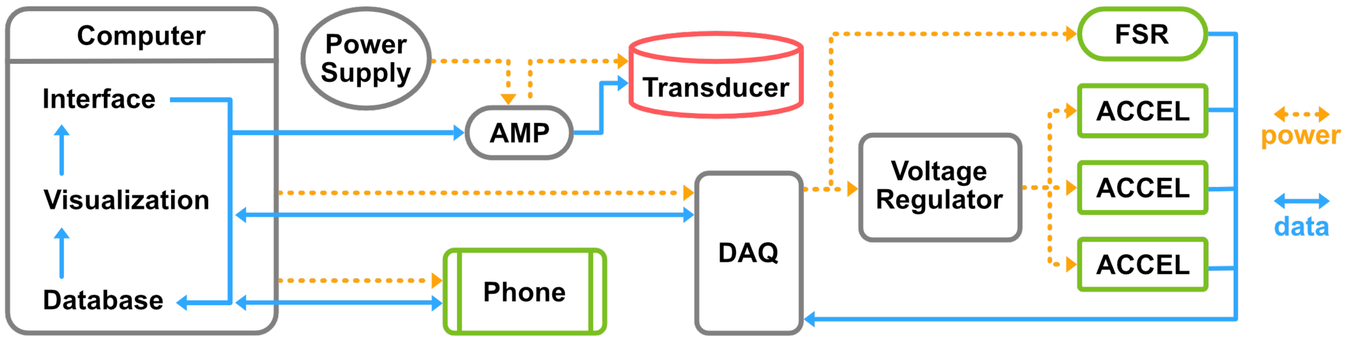
OsteoApp

Towards Ubiquitous Osteoporosis Screening

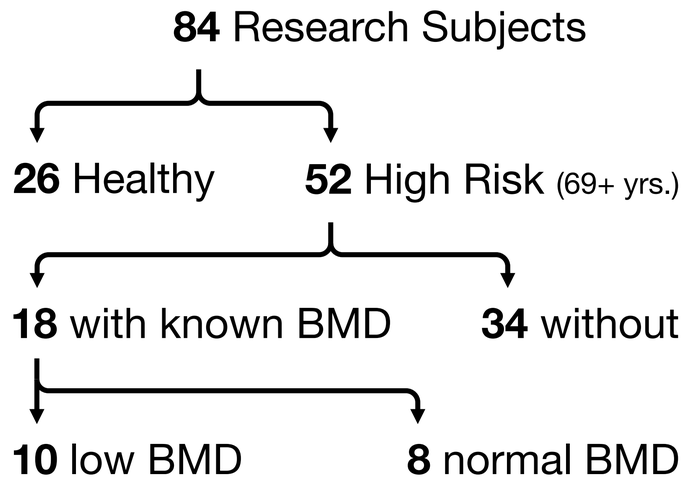


- Osteoporosis causes **9 million** annual fractures worldwide
- The majority of cases continue to go **undiagnosed**
- Currently osteoporosis screening is **expensive and invasive**
- There is a need for more **ubiquitous** osteoporosis detection
- We propose **OsteoApp**, a bone mass density (BMD) screening app

Pilot Study Design

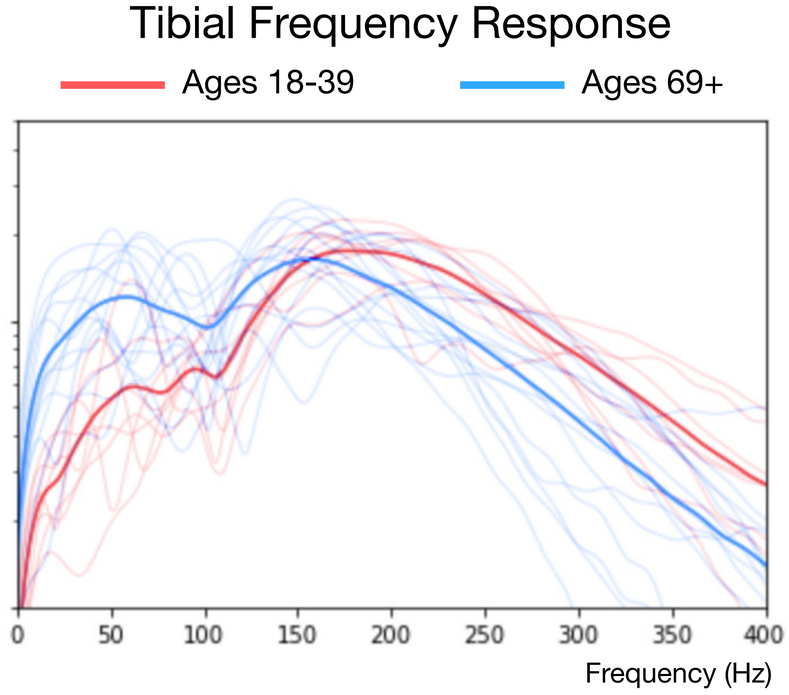


Experimental setup to validate smartphone tibial natural frequency measurement.



Preliminary Findings

- Smartphones can measure tibial **natural frequency**.
- Results suggest **age-dependent** frequency response
- **Demographic factors** are strongly predictive of BMD
- Bone size and tissue differences are **confounding factors**
- Future work should examine **longitudinal** BMD changes



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