AI and Human Health

Participants

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Shannon Gillespie	CON	Gillespie.175@osu.edu
Emma Wenckowski (Scribe)	OR – Translational Data Analytics Institute	Wenckowski.1@osu.edu

Assets

- **Lynda Hartel (LH) – Asst. Vice President Health Sciences – Dir. Prior HSL**
  - Can provide context and data assets
- **Yanhui Ma (YM) – Postdoctoral Researcher**
  - Expertise in imaging data use, optical tomography and ultrasound (non-clinical)
  - Knowledge of algorithms
- **Herman Shen (HS) – Professor**
  - Can inversely detect problems in machines; expand to production systems
  - Knows how to assemble tools, especially system data
- **Samantha Krening (SK)– Asst. Prof.**
  - Expertise in system dynamics and control
  - Interactive ML for the masses (e.g., AI assisting nurses)
- **Christopher Bartlett (CB) — Principal Investigator NWSH and Assoc. Prof. Pediatrics**
  - Expertise in mathematical medicine mapping from real world to neural networks
  - Works with small datasets
  - Reverse engineering (feature engineering)
- **Linda Lowes (LL) — Principal Investigator – Ctr. for Gene Therapy and Assoc. Prof. Pediatrics**
  - Expertise in infant movement, movement complexity data, rare diseases, de-identified clinical datasets
- **Shannon Gillespie (SG) – Asst. Prof., Clinical nurse midwife**
  - Prenatal care, pre-term birth, psycho-neuro immunology
- **Xia Ning (XN) – Asst. Prof.**
  - Bridges BMI and CS
  - Provide connections to CSE with expertise in deep learning

Link and Leverage Our Big Ideas (Looking for top three)

- Big gap in connecting methodologies and domain knowledge
- Imaging and video analysis (accuracy)
- Lack of partnerships with AI experts who are interested in biology-centered datasets
- Stats: significance, p-values, linear regression methods
- Bio info: knows data (bio + stats or AI) apply existing methods and great at developing hypotheses
- ML + AI are great at developing methods in hope they can be applied to data

Project idea: create a tutorial - problems can we solve by joining clinicians with stats, bio info and ML/AI?

The big easy: connect domain and technology knowledge