Associate Professor Mark V. Albert
Department of Computer Science and Engineering
Department of Biomedical Engineering

Associate Professor, Director of Biomedical Artificial Intelligence Lab
**Research Group: 8 PhD, 5 MS, 5 Undergrad**

Biomed-AI.com

UNT — UNIVERSITY OF NORTH TEXAS

Shirley Ryan Abilitylab — The future of RIC Rehabilitation Institute of Chicago

NIH National Institutes of Health — Shriners Hospitals for Children

Integrated Deep Learning, Software Deployment, and Validation for Medical Outcomes Assessment

Data-driven Clinical Outcomes Prediction

Treatment scoring and suggestion, Shriners surgery prediction system
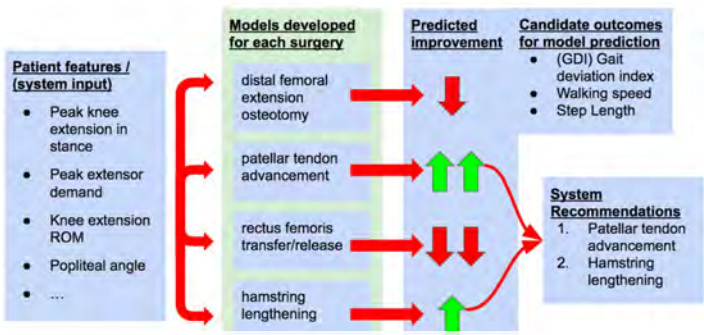
- Deep learning and traditional machine learning to measure, <u>succinctly summarize</u>, and predict clinical outcomes
- End-to-end development and deployment through integrated teams
- Unsupervised ML relations to sensory computational neuroscience explored
- Emphasis on validation strategies for robust, real-world clinical application

Real-time fall detection and response

Autoencoders for summarizing high-dimensional sensor-based metrics and outcome measures
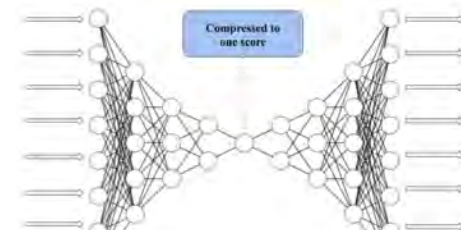
Single metric represented overall functional ability 50% better than competing outcome measures

Systems and Methods for a Rehabilitation Dashboard (US Patent App. 14/468,051)
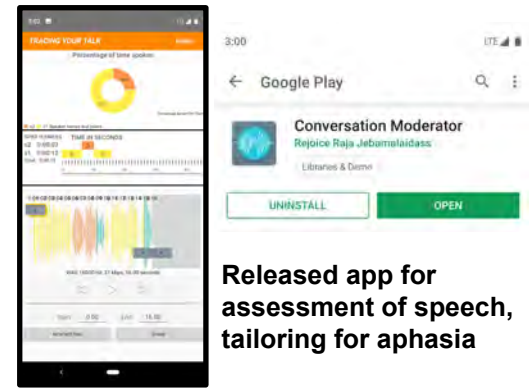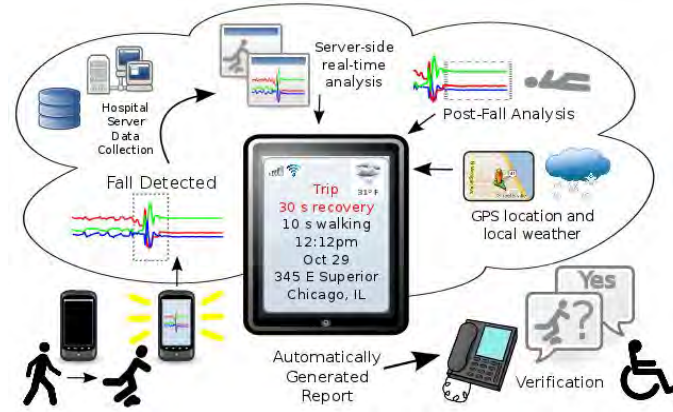
Released app for assessment of speech, tailoring for aphasia