Contact

www.linkedin.com/in/samanparvaneh (LinkedIn)
www.saman-parvaneh.com/en (Personal)
www.researchgate.net/profile/Saman_Parvaneh (Other)
www.research.philips.com/locations/cambridge-ma.html (Company)

Top Skills

Biomedical Engineering
Image Processing
Signal Processing

Languages

English (Professional Working)
Persian (Native or Bilingual)

Certifications

Maintenance, installation and fault diagnosis regarding Melag disinfection machines (Vacukalv, Cliniklav, MELAsealpro, MElag water treatment systems and MELAG software)
Service and maintenance training course on the SINTION disinfection device
License to Lead
Techniques and Concepts of Big Data
Leading Teams

Honors-Awards

First prize in the international annual PhysioNet/Computing in Cardiology Challenge 2016
Granted a research fellowship on “Study of Cardiac Autonomic Nervous System Control across Frailty Status”
Ranked 1st awarded paper in the second biomedical engineering conference in Tehran-Iran

Saman Parvaneh

Principal Data Scientist in Healthcare
Irvine, California

Summary

- Over a decade of research experience in multiple technology areas related to both acute and chronic disease (geriatric-related disease, cardiovascular disease, and diabetes).
- Experienced technical expert and innovator in healthcare with a focus on digital health, personalized health solution, body-worn technology and mHealth technology, assistive technology, and clinical decision support systems.
- Experience in evaluation and validation of prototype technologies and algorithms.
- Prior experience of working in a clinical setting.
- Experience in creating strong collaboration with clinicians and experts to identify problems and figuring out the best solutions to resolve them

I am always interested in hearing from former colleagues, managers, or just interesting creative folks, so feel free to contact me if you would like to connect.

Speculators:
- Biomedical signal processing and modeling
- Development of Clinical Decision Support
- Algorithm development
- Body-worn technology

Experience

Edwards Lifesciences
Principal Data Scientist
January 2020 - Present (3 months)
Irvine, USA

Philips Research North America
5 years 1 month

Second place in the international annual PhysioNet/Computing in Cardiology Hackathon 2019 on Sepsis Prediction

Publications

Cardiac arrhythmia detection using deep learning: A review

Analyzing Single-lead Short ECG Recordings using Dense Convolutional Neural Networks and Feature-based Post Processing to Detect Atrial Fibrillation

Using Cadaver Simulation to Improve Communication and Economy of Movement as Evidence of Progress with the Trans-catheter Aortic Valve Implantation (TAVI) Learning Curve.

Influence of Experience on Mental Stress During Robotic Cardiac Surgery

Postural Transitions during Activities of Daily Living Could Identify Frailty Status: Application of Wearable Technology to Identify Frailty during Unsupervised Condition

Patents

Method, device, and system for diagnosing and monitoring frailty

Classifier ensemble for detection of abnormal heart sounds

Methods and apparatuses for handgrip strength assessment using pressure-sensitive elements

Pressure ulcer prevention

Hypoxia Detection

Senior Data Scientist
October 2016 - January 2020 (3 years 4 months)
Greater Boston Area

- Independently and collaboratively conducted research on healthcare technology, including project management, design and execution of evaluation and exploratory studies, data analytics, and concept exploration and development for clinical analytics and aging-in-place
- Designed and developed personal health solutions
- Designed and developed clinical decision support systems and predictive modeling
- Developed algorithms for context-aware applications
- Evaluated and validated technologies with end-users

Data Scientist
September 2015 - October 2016 (1 year 2 months)
Greater Boston Area

- Designed and developed personal health solutions
- Designed and developed clinical decision support systems and predictive modeling
- Developed algorithms for context-aware applications
- Evaluated and validated technologies with end-users

Clinical Scientist
January 2015 - September 2015 (9 months)
Rochester, Minnesota Area

- Development and validation of algorithms to support clinical decision-making
- Designed and developed predictive modeling for critical care forecasting
- Devise and implementation of strategies for clinical evaluations of prototypes
- Governing research agreement process, ensure compliance, monitor project progress and
value extraction
- Interacting with clinical partners and research teams

The University of Arizona
2 years 2 months

Scientific Member of the University of Arizona Center on Aging (ACOA)
December 2012 - December 2014 (2 years 1 month)
Tucson, Arizona Area

As a scientific member of Arizona Center on Aging (ACOA), I was in close contact with a community of researchers, health care providers and educators who work to further the knowledge of aging and utilize it to improve the healthspan and lifespan of older adults. In this role, I seek to develop cost-effective new technologies for our rapidly aging population that will help them remain living independently in their own homes.

► Projects:

- Assessment of cardiac autonomic nervous system in older adults with different level of Frailty
- Assessment of gait, balance, and activities of daily living in geriatric cohort
- Fear of falling and its association with physical activity and gait parameters in non-frail, pre-frail and frail subjects

Postdoctoral Research Associate in Department of Surgery and Arizona Center on Aging

November 2012 - December 2014 (2 years 2 months)

Tucson, Arizona Area

- Initiated cardiac monitoring (e.g., ECG, heart rate, and HRV) and objective stress assessment studies
- Developed signal processing methods for different clinical applications
- Developed algorithms based on body-worn technology (e.g., acceleration, gyroscope, and pressure sensor), which could be translated to a clinical setting
- Participated in evaluation and validation of novel clinical technologies
- Trained undergraduate students
- Prepared Institutional Review Board (IRB) proposals

► Projects:

- Assessment of physiological stress response in surgeons during surgery based on bio-signals recording, including heart rate, HRV, and respiration rate
- Assessment of stress in diabetes patients and study of its association with wound healing
- Evaluation of economy of motion in a clinical team using wearable technology and using it for an objective assessment of learning curve
- Study of heart response to activities of daily living

- Assessment of gait, balance and activities of daily living in geriatric cohort
- Fear of falling and its association with physical activity and gait parameters in non-frail,

  pre-frail and frail subjects

Iranian Society for Biomedical Engineering (ISBME)
7 years 2 months

Head of Student Branch and Admission Committee Member
November 2006 - December 2013 (7 years 2 months)

- Supervised Biomedical Engineering Society's student chapters in Iran
- Organized Iranian Biomedical Engineering Olympiad
- Organized different workshops for Biomedical engineering students

Administrative Council Member
November 2006 - December 2013 (7 years 2 months)

Iranian Society for Biomedical Engineering (ISBME) is formed for the expansion and promotion of country's medical equipment industry through provision and development of cohesive and organized relation between medical engineering industries, consumer centers of medical engineering products, universities and active research centers in fields of medical engineering, organizations and concerned state centers.

Azad University, Science and Research Branch
7 years 1 month

Assistant Professor in Department of Biomedical Engineering
January 2012 - September 2012 (9 months)

- Member of the steering committee that designed and evaluated undergraduate clinical engineering program in Iran
- Lectured multiple undergraduate and graduate courses
- Designed and led workshops and training courses
- Successfully supervised 71 undergraduate students and advised two graduate students
- Developed training booklets for Intel Microprocessor for biomedical engineers,

PIC microcontroller for biomedical engineer, introduction to biomedical engineering,

medical physics, and computer architecture

Senior Lecturer in Department of Biomedical Engineering

September 2005 - January 2012 (6 years 5 months)

- Syllabus designer for Clinical Engineering Program
- Lectured multiple courses such as Introduction to Biomedical Engineering, Medical Physics,
Algorithmic Programming, and Electronics and Digital Basics
- Designed and led workshops and training courses
- Successfully supervised 71 undergraduate students and advised two graduate students
- Developed training booklets for Intel Microprocessor for biomedical engineers,
PIC microcontroller for biomedical engineer, introduction to biomedical engineering,
medical physics, and computer architecture

Azad University, Science and Research Branch
Research Assistant
September 2001 - February 2002 (6 months)

- Participated in the establishment of several labs, including Biomedical Engineering lab,
microcontroller lab, and control system lab

Education

University of Arizona
Postdoctoral Research Associate, Biomedical Engineering (Clinical Outcome Evaluation) · (2012 - 2014)

Azad University, Science and Research Branch
Doctor of Philosophy (PhD), Biomedical Engineering · (2005 - 2011)

Azad University, Science and Research Branch
Master of Science (MSc), Biomedical Engineering · (2003 - 2005)

Azad University, Science and Research Branch
Bachelor of Science (BSc), Electrical and Biomedical Engineering · (1998 - 2003)