

EMPLOYMENT

Bioengineer / Project Manager, ATAP **Google via Adecco** **May 2016 – Present**

- Leading research and development, device testing, biometric signal acquisition, processing, and biosignal analysis
- Led design, planning, and execution of human subjects research studies and data analysis (100+ users, IRB Approved)
- Inventing, evaluating, and validating prototypes using new sensor and actuator technologies (IDF filed)
- Proactively took on Project Manager responsibilities after departure of Project Manager from core team
- Spearheaded HW, FW, and SW development of 30+ user study devices from conception to manufacture
- Led software development of cloud dashboard, Android debug app, and client-facing Android app for user studies
- Successfully managed over 5 critical path vendor projects (\$1M+)

Graduate Research Associate **Arizona State University** **Aug 2010 – Dec 2015**

- Performed original research resulting in over 10 peer-reviewed journal (3+) and conference (7+) publications
- Designed and constructed a high performance pulsatile pump for *in vitro* aortic flow experiments in 3-dimensional models and validated it using image processing motion estimation techniques
- Validated entrance length and development time requirements for starting flows driven by a constant volume flux using custom-built particle image velocimetry (PIV) system and computational fluid dynamics (CFD)
- Developed a predictive algorithm and workflow to generate downstream waveforms in a pulsatile flow loop system with over 95% accuracy for validating high Reynolds number CFD simulations

Research Assistant **Georgia Institute of Technology** **Jan 2009 – May 2010**

- Manufactured blood vessel constructs from collagen and rat aortic smooth muscle cells for mechanical testing
- Performed histology, axial loading tests, and pulse-diameter Instron tests using ASTM and ISO standards

Clinical Research Assistant **Grady Memorial Hospital, E.R.** **Jan 2009 – May 2009**

- Collected clinical research data and conducted >100 interviews with congestive heart failure patients
- Designed and wrote NIH Clinical Research Trial Grant proposal for a sleep apnea study

EDUCATION

Tempe, AZ **Arizona State University** **Aug 2010 – Dec 2015**

- Ph.D. in Biomedical Engineering, December 2015. GPA: 3.91/4.0
- M.S. in Biomedical Engineering, December 2015. GPA: 3.91/4.0
- Co-Advisors: David Frakes and Ronald Adrian
- Ph.D. Thesis: “Improved Techniques for Cardiovascular Flow Experiments”
- Relevant Coursework: Modeling and Simulation of Physiological Systems, Medical Imaging Instrumentation, Biomedical Image Processing, Fluid Mechanics, Computational Fluid Dynamics, High Performance Computing

Atlanta, GA **Georgia Institute of Technology** **Aug 2006 – May 2010**

- B.S. in Biomedical Engineering (Pre-Med) with Research Option, May 2010. GPA: 3.44/4.0 (High Honor)
- Relevant Coursework: Digital Signal Processing, Biomedical Systems and Modeling, Quantitative Engineering Physiology, Systems Physiology, Biomechanics, Biotransport, Biosolid Mechanics, Differential Equations

ADDITIONAL EXPERIENCE AND AWARDS

- **Teaching Instructor:** *BME 300: Bioengineering Product Design*, an undergraduate course with 170+ students (2015)
- **Selected Leadership:** National Alpha Eta Mu Beta (AEMB) Honor Society Student Treasurer (2012–2014), ASU AEMB Treasurer & Co-President (2012–2014), GT Biomedical Engineering Society President (2008–2010)
- **Selected Awards:** ARCS Foundation Scholar (2014), Dean’s Engineering Fellow (2010–2015), Outstanding Senior Leadership Award (2010), Dean’s List (2006–2010), President’s Undergraduate Research Award (2009)

TECHNICAL SKILLS & PASSIONS

- MATLAB & PYTHON – Data Acquisition – Laser & Optics – Hardware Integration
- Git, Gerrit, Cider, JIRA – Data Science – IRB & FDA Regulatory – 3-D Rapid Prototyping
- Embedded Systems – Biosignal Analysis – Prototype Bring-up – Photoshop
- Arduino, nRF52x – Medical Imaging – Hardware Validation – Technical Writing
- **Foreign Languages:** Spanish (Conversational), Bengali (Fluent)
- **Personal Hobbies & Interests:** Marathon running (completed two full marathons), Ballroom dancing, SLR photography