Pranav Lakshminarayanan
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Johns Hopkins University
Department of Biomedical Engineering

EXPERIENCE

Multi-faceted and hardworking individual with leadership and teamwork experience.
Proficiency in programming and computing in Java, Python, Matlab, and R, including scientific visualization, data analysis, design of efficient data structures, design of GUIs, and creating mobile applications for Android.
Experience in laboratory and research settings with knowledge of use of laboratory equipment for electronics design and testing.

EDUCATION

2012 – Dec 2015 Johns Hopkins University
Major in Biomedical Engineering
Concentrated in Biomedical Instrumentation
Current GPA: 3.49

2008 – 2012 Mt. Hebron High School
Ellicott City, MD
Graduated #2 in a class of 311
Weighted / Unweighted GPA: 4.84 / 4.00

RELEVANT COURSEWORK

Spring 2015	**Fall 2014**	**Spring 2014**
Computer Integrated Surgery II	Computer Integrated Surgery I	Biomedical Models and Simulations
Very Large Scale Integration (VLSI)	Medical Imaging Systems	Biomedical Systems, Signals, and Controls
	Systems Bioengineering	Electronics and Instrumentation

RESEARCH AND INTERNSHIPS

Sept 2014 – Present Laboratory for Computational Sensing and Robotics, Johns Hopkins University
Designing Wearable Intelligent Navigation System for Surgery (WINSS)
Device is intended to track surgical tools and show oriented visualizations in wearable head mounted device

Sept 2013 – Aug 2014 Center for Imaging Science, Johns Hopkins University
Designed functions for CAWorks visualization software, including interaction with surfaces and MRI images
Provided support to other researchers and users using CAWorks software and communicated with developers at Kitware Inc.

June – Aug 2013 St. Agnes Hospital, Baltimore, MD
Shadowed physicians, technicians, and surgeons throughout the hospital
Observed the use of biomedical technologies in diagnostics, care planning, and treatment

July 2010 Dr. Kamakshi Memorial Hospital, Chennai, India
Shadowed physicians in various medical disciplines
Learned about the use of medical technologies by witnessing their use in a medical setting

PROJECT EXPERIENCE

Spring 2015 – Present Surgical Instruments for Robotic Open Microsurgery (CAD, C++)
Designing needle drivers for micro-vascular suturing to be used with steady-hand surgical robot
Organize mock operations with surgeon and clinical trials to test effectiveness of designs

Fall 2014 – Present Design of Wearable Intelligent Navigation System for Surgery (Java, Android)
Designing wearable augmented reality surgical system using Epson Moverio BT-200 Android-based smart glasses for tracking of surgical tools and creation of oriented visualizations to be used intra-operatively

Spring – Fall 2014 Development of modules for CAWorks Visualization Software (C++)
Wrote functions for surface-image interaction and image overlay, and fixing of existing bugs

LEADERSHIP POSITIONS

Spring 2014, 2015 Teaching Assistant for Scientific Computing with Matlab, Python, and R course
Graded assignments and exams and held weekly office hours to reinforce teaching of course material

2011 – 2012 Instructor at Kumon Learning Center
Taught elementary to high school age children math and reading skills

2010 – 2012 Executive Board Member of National Honor Society, Mt. Hebron High School
Volunteer over 40 hours per school year at events in Ellicott City, MD to help improve the local community
Communicated with local organizations to create a network of volunteer services based out of the school