Arjun [No Last Name]

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EDUCATION

University of California Los Angeles *Fall 2017*
B.S. Electrical Engineering

The Doon School, India *Spring 2011*
High School Diploma

EMPLOYMENT

Center for SMART Health, UCLA *Jun 2016 - Dec 2017*
Software Developer, SARP Project

- Designed feature extraction models for human activity recognition using inertial sensors.
- Built a cloud-based fleet management platform for 150+ devices.
- Built DevOps tool-chains for automated and streamlined ground-truth data collection.

Wireless Health Institute, UCLA *Jan 2015 - May 2016*
Wearable Platforms Developer, SARP Project

- Sole author of multiple Android Wear applications, deployed on 150+ devices.
- Implemented automated and secure data transfer solutions for HIPAA sensitive information over private VPNs

Embedded & Reconfigurable Systems Lab, UCLA *Aug 2014 - Dec 2014*
Undergraduate Research Assistant

- Mined EHR datasets for evaluating risk of re-hospitalizations for patients with congestive heart failure

COURSEWORK

Digital Signal Processing, Algorithm Design, FPGA Design, Computer Architecture, Feedback Control, Automata Theory, Introduction to CUDA

SKILLS

Programming: C, Java, Python, UNIX Shell, MATLAB, LaTeX
Frameworks: Android Wear, AWS S3/EC2, TensorFlow, Weka, Xilinx, TI CCS, OpenCV
Hardware: PCB design & etching, EagleCAD, SMT soldering rework, Arduino

PROJECTS

Deriche Edge Detector: An IIR implementation of the Canny detector for real-time execution on low powered ARM DSPs. Implementation includes a progressive blur kernel, gradient detection, non-maximal suppression, hysteresis thresholding and Hough Transform.

Indoor Navigation Using Ambient WiFi: Precise indoor localization and navigation using ambient WiFi signals, trained using supervised learning on multi-class data (upto 30 unique locations). Written for Android with real-time feedback and on-the-fly training using Bayesian models.

Human Activity Recognition on Smartwatch: Feature extraction and supervised learning on data from wrist-worn inertial sensors. Ability to distinguish between walking, running, lying down, sitting, or standing with high accuracy and low sampling rate.

Analog Utility Meter Reader: Interpret snapshots of analog power meter readings as numerical data in real-time. Implemented in Python using OpenCV for Raspberry Pi with an attached USB camera.

PUBLICATIONS

R. Malavalli, **Arjun**, N. Gupta, *"Indoor Localization Through Machine Learning on WiFi Fingerprints"*, International Conference on Indoor Positioning and Navigation (IPIN'17).

Bouchard K., Ramezani R., **Arjun**, Naeim A., *"Evaluation of Bluetooth Beacons Behavior"*, The 7th IEEE Annual Ubiquitous Computing, Electronics and Mobile Communication Conference (UEMCON'16), pp.1-3, IEEE, 2016.

B. Moatamed, **Arjun**, F. Shahmohammadi, R. Ramezani, A. Naeim, M. Sarrafzadeh, *"Low-cost indoor health monitoring system"*, Wearable and Implantable Body Sensor Networks Conference (BSN 2016), pp.159-164, IEEE, 2016.

PATENTS

PCT/US2016/037398: *"Subject assessment using localization, activity recognition and a smart questionnaire"*, A.Naeim, R. Ramezani, **Arjun**, B. Moatamed, M. Sarrafzadeh