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EDUCATION	University of California Los Angeles <i>B.S. Electrical Engineering</i>	<i>Fall 2017</i>
EMPLOYMENT	Risk Sciences Institute, UCLA <i>Software Developer, NASA JPL Subcontract</i> <ul style="list-style-type: none">• Design and implementation of internal tooling frameworks for reliability testing and risk analysis.• Modeling automated circuit simulations (Spice) as basic events in fault trees for component failure analysis. Center for SMART Health, UCLA <i>Lead Software Developer, Sensing At-Risk Populations (SARP) Project</i> <ul style="list-style-type: none">• Development lead for remote health monitoring system currently servicing 300+ patients. Job entailed database design, wearable development and API integration for web and mobile applications.• Implementation of machine learning algorithms (Tensorflow) tackling health-care datasets.• Design and implementation of a cloud-based fleet management platform using AWS for 300+ devices.• Enhanced system reliability by building automated test & data integration suites. Wireless Health Institute, UCLA <i>Embedded Systems Development Lead</i> <ul style="list-style-type: none">• Development lead for 5 standalone Android smartwatch applications (about to deploy to 900 patients).• 300% increase in smartwatch battery life by designing an efficient, multi-threaded CPU scheduler.• Enforcing HIPAA-compliance on wearables by implementing RSA/AES256 encryption for stored patient data. Embedded & Reconfigurable Systems Lab, UCLA <i>Research Assistant</i> <ul style="list-style-type: none">• Predicted risk of re-hospitalizations for congestive heart failure patients within 3.3 days (RMSE) by performing clustering analysis on Electronic Health Record datasets.	<i>May 2018 - current</i> <i>Jun 2016 - Dec 2017</i> <i>Jan 2015 - Jun 2016</i> <i>Aug 2014 - Jan 2015</i>
COURSEWORK	Digital Signal Processing, Circuit Analysis, Algorithm Design, FPGA Design, Filter Design, Computer Architecture, Feedback Control, Automata Theory, Introduction to CUDA	
SKILLS	<i>Programming:</i> C/C++, Java, MATLAB, Python, JS, UNIX Shell, React, L ^A T _E X <i>Hardware:</i> PCB Design & Etching, EAGLE, NgSpice, SMT soldering rework, Arduino <i>Frameworks:</i> Android, Wear OS, Docker, SpringBoot, Xilinx, TI CodeComposer, OpenCV, TensorFlow, Weka	
PROJECTS	Human Activity Recognition on Smartwatch: Real-time detection using supervised learning on wrist-worn MEMS inertial motion sensor data. Distinguishes between walking, running, lying down, sitting, standing or inactive. 256 extracted features include energy & entropy in time & frequency domains. Classification performed using Neural Networks with $\geq 85\%$ accuracy in real-world scenarios. Currently being used by 300+ patients in an LA rehab facility. Indoor Location Fingerprinting Using Ambient WiFi: Models multimodal WiFi RSSI as Gaussian Processes and performs Bayesian Estimation for probabilistic location classification. Time-segmented feature extraction on highly sparse datasets. Written for Android with near-real-time feedback and online supervised learning. $\geq 70\%$ accurate within 3 seconds, $\geq 90\%$ accurate with 10 seconds. Convex Polygon Detector: Real-time polygon detection for low-powered ARM DSPs. The multistage pipeline includes IIR Deriche filter, progressive blurring kernel, gradient detection, non-maximal suppression, hysteresis thresholding and Hough Transform. Final step computes polygon edge count, orientation and side-lengths. Analog Utility Meter Reader: Power consumption detection in real-time from analog dials in LA power meters using snapshots from mounted USB cameras. OpenCV implementation pipeline includes noise suppression, SIFT, circular Hough Transform & needle angle detection.	
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 US Provisional Application (62/330,730) filed May 2, 2016: “Indoor Health Monitoring System”, A.Naeim, R. Ramezani, Arjun , B. Moatamed, M. Sarrafzadeh	