Krishna Vijay Samayamantri

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Objective

Seeking jobs as a biomedical engineer in hardware prototyping.

Summary

Highly motivated individual with broad skill-set and 5 years of research and development experience. Has built hardware prototypes for devices in home automation and biomedical diagnosis.

Education

M.S. Electrical Engineering (Biomedical Engineering Specialization)
California State University, Los Angeles   - Spring 2019
Thesis: Performance of an SVM Classifier on Non-Invasive EEG for a 2-State BCI Controller
GPA: 3.855/4.0

B.E. (hon.) Electrical and Electronics Engineering
Birla Institute of Technology and Science (BITS) - Pilani   - Fall 2012
GPA: 5.37/10.0

Certifications

Advances in Imaging and AI: Medical, AR-VR, Self Driving Cars, MIT Professional Programs   - Jul 2019

Entrepreneurship: Launching an Innovative Business Specialization, Coursera and University of Maryland, College Park   - Apr 2016

Related Experience

Work History

Krishna Vijay Technologies, Hyderabad, India, Founder   - Feb 2015-July 2016

- Minimum Gas-Wastage System — micro-controller based control system that turns off gas stove when gas leak is detected or when food is cooked, based on timer and temperature control.

Student Research Intern, CEERI - Chennai, India   - Jul 2012-Nov 2013

- Designed wireless ECG monitoring system to detect arrhythmia.

- Built Mind-controlled wheelchair that assists in quadriplegic locomotion through EEG corresponding to their facial expressions. (https://sites.google.com/site/mindcontrolledwheelchair/)

- Developed algorithm to find patterns in ECG data to classify into arrhythmia or normal heartbeat.

Projects

Performance of an SVM Classifier on Non-Invasive EEG for a 2-State BCI Controller (Master's thesis)   - Feb 2018-May 2019
Control algorithm that interprets EEG of subject to detect their action or intent to control a robotic arm.

Automated IR Imaging of Broken Bones (AIRiBnB) - Oct 2016
Model to quickly identify and localize bone fractures from other injuries using IR imaging.

Multiple Object Tracking in 3D Using Stereovision - Jan - Apr 2012
Algorithm that tracks multiple objects in 3 dimensions using RJMCMC models for path prediction even during occlusion.

Miscellaneous

- Modulation and Demodulation of Speech signals for Communication using code composer studio

- Designed the body of All Terrain Vehicle (ATV) guided by GPS and proximity sensors

Relevant Courses

Biomedical Devices • Digital Signal Processing • Biomedical Signal Processing • Fundamentals of Machine Learning • Neural Computation • Advanced Digital Communications I • Wireless Communications • Stochastic Systems and Estimation

Skills

Fields of Expertise: Hardware prototyping, Signal Processing, Image Processing, Machine Learning, Biomedical Diagnostics, EEG, ECG, EMG, Motion Capture Data
Programming Languages: C, C++, Matlab, Python, LabVIEW
Markup: LaTeX, HTML, CSS
Design Tools: Arduino IDE

Accomplishments

- Published the paper titled, "Classification of Data Obtained from Portable ECG Devices Using Support Vector Machines" in ICAES-2013, an IEEE affiliated conference.

- Third prize in BioHackLA Hackathon conducted at Cal State LA on October 22-23, 2016

- Recipient of Honor's convocation - 2018

- Member of Golden Key Honor Society - 2018

Additional Experience

1. Volunteer at Art of Living Foundation, LA chapter, 2016 - present

   - Resident sound engineer for all events since 2017
   - Tech support for audio-visuals

2. Member of Electronics and Robotics Club, BITS-Goa, 2008-2010

3. Member of Department of Photography, 2008-2010

References

Available upon request.