

Ateendra Ramesh

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Experience

- **Sollarillion Foundation** **Chennai, India**
Full Time Research Assistant & Teaching Assistant *September 2015–Present*
 - Researched and worked on low-cost and efficient IoT solutions for gesture recognition and activity recognition and published findings in IEEE Conferences.
 - Helped students in developing problem-solving skills and taught them fundamental concepts in programming and embedded systems.
 - Administered a machine learning server and NAS system.

Education

- **SSN College of Engineering** **Chennai, India**
Bachelors in Information Technology, CGPA : 8.01/10 *2013–2017*
- **SBOA School and Junior College** **Chennai, India**
AISSE (Class 12), 94.2% *2012–2013*
- **SBOA School and Junior College** **Chennai, India**
AISSE (Class 10), CGPA : 9.2/10 *2010–2011*

Publications

- **Low Cost Gesture Recognition System Using MEMS Accelerometers**
 - Designed and constructed a wearable glove prototype embedded with accelerometers that recognizes static gestures.
 - Developed a lightweight algorithm in order efficiently and quickly recognize alphabets of the American Sign Language.
 - Presented at the **Global IoT Summit, 2017** at Geneva, Switzerland and published in IEEE Xplore.
 - Tools used: Arduino, C++
- **Design Optimization of Activity Recognition System on An Embedded Platform**
 - Led a team of 3 RA's to design an activity recognition engine optimized on grounds of cost, computational complexity and power consumption using data acquired in three publicly available datasets.
 - Engineered features in order to reduce computational complexity and trained various classifier models and measured overall performance in terms of time and efficiency.
 - Deployed the same in a low-cost Raspberry Pi Zero.
 - This work is to be presented at the **Future of Information and Communication Conference, 2018** at Singapore.
 - Tools used: Scikit-Learn, Tensorflow, Numpy, Raspberry Pi

Projects

○ **Movie Occupancy Forecasting [Current]**

- Working in collaboration with one of the top 3 multiplex chains in India.
- Engineered and extracted features for forecasting occupancy of a movie's premiere from current and history booking data.
- Developing an application to be deployed into production.
- Tools used: Scikit-Learn, Tensorflow, Numpy, AWS, SQL Server

○ **SF_Automation**

- Developed an algorithm to calculate attendance from raw time-stamp data acquired from a biometric attendance machine.
- Created a bot that schedules and announces office hours for TAs and keeps track of progress made by students during their orientation phase at Solarillion Foundation on Slack.
- Deployed the aforementioned systems in Heroku.
- Tools used: Pandas, Numpy

○ **Bus Stop Recognition System**

- Developed a system that identifies bus-stops using images acquired from cameras placed atop a bus using a simple hybrid nearest neighbor algorithm as part of Bachelor's Thesis.
- Collected data for the same from 8 distinct bus-stops and simulated near real-world scenarios.
- Tools used: Numpy

○ **Speed Control of a DC Motor**

- Developed an algorithm to stabilize the error between the user given and sensed speed under no load and loaded conditions for a 12 V DC motor using ATmega 328P micro-controller
- Tools used: Arduino

Achievements

- Secured 95th percentile at Hackerrank in the Algorithms domain.

Technical skills

○ **Programming Languages:**

- *Proficient in:* C, C++, Python, Arduino and \LaTeX .
- *Familiar With:* Javascript, Java, HTML, Lua, CSS, Octave, Fortran, GoLang, Bash, SQL and PHP.

- **Platforms:** Linux, Android Studio, AWS and Heroku.

- **Hardware:** Arduino, Raspberry Pi and BeagleBone.

- **Frameworks:** Scikit-Learn and Tensorflow.