Ateendra Ramesh

Chennai, Tamil Nadu, India

☐ +91 8056098275 • ✉ ateendraramesh@gmail.com
🌐 ateexd.github.io

Experience

Solarillion Foundation   **Chennai,India**
Research Assistant   *February 2016–Present*

- Researched and worked on low-cost and efficient IoT solutions for gesture recognition and activity recognition and published findings in IEEE Conferences.
- Administered a machine learning server and NAS system.

Solarillion Foundation   **Chennai,India**
Teaching Assistant   *September 2016–Present*

- Helped students in developing problem-solving skills and taught them fundamental concepts in programming and embedded systems.

Education

SSN College of Engineering   **Chennai, India**
Bachelors in Information Technology, CGPA : 8.01/10   *2013–2017*

SBOA School and Junior College   **Chennai, India**
AISSCE (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 Static 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

○ **Intelligent 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, 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.