Aravindh Soundararajan

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EDUCATION

University of Southern California, Viterbi School of Engineering — **Los Angeles, CA**
Selected for Distinguished Masters Honors Program
Master of Science, Electrical Engineering (specialization in Machine Learning and Data Science) — **Aug 2021-May 2023**
Linear Algebra, Probability, Deep Learning, Machine Learning, Computing Principles — **3.85 / 4.00**

Amrita Vishwa Vidyapeetham, — **Coimbatore, India**
Bachelor of Technology, Electronics and Communication Engineering — **Aug 2014-May 2018**
Computer Programming, Signals and System, Digital Signal Processing, Microprocessor, Microcontroller — **8.94 / 10**

TECHNICAL SKILLS

- Languages: Python, C++, C, NI LabVIEW, MATLAB
- Developer Tools: VS Code, PyCharm
- Technologies/Frameworks: Linux, GitHub, OpenCV, TensorFlow, Keras, Pandas, Matplotlib, Seaborn, Bazel, Power BI

EXPERIENCE

Soliton Technologies — **Coimbatore, India**
Senior Project Engineer, — **Jun 2018–Jul 2021**

- Developed an OCR plugin for the MAVIS framework (used in Medical V&V) OpenCV, TensorFlow, tesseract, Keras and Pandas and which increased test coverage to 250% for one of our major clients.
- Worked on a packaging automation framework as a Python backend engineer, which involved automating the user's workflow of running Abaqus scripts, followed by running a custom MATLAB executable and generating an automated report.
- Implemented face recognition-based Attendance / Welcoming bot using python and one-shot learning.
- Designed a backend engine using vision algorithms like, SIFT, ORB, Perspective transform, Tesseract and Haar-Cascade to obtain the Orthographic view of an Image and extract text and faces from it.
- Conducted a 2-day workshop on “Computer Vision with Machine Learning” at PSG Tech, Coimbatore as part of CSR.

3M R&D (Offshore Contract Employee from Soliton Technologies) — **St. Paul, MN**
Contract Python Developer, — **Jun 2018–Jul 2021**

- Lead the offshore team on a web application project developed in python and angular for a Bluetooth Low energy device.
- Developed a tool involving vision algorithms in analyzing / modify the surface profile of a 3D image from a 3D Scanner
- Developed tool to obtains the thickness of the thin film using frequency domain signal processing and spectroscopy.

RESEARCH EXPERIENCE

Directed Research in WIDES Group | University of Southern California (Ongoing)

- Started to work as a Directed research assistant under the guidance Prof. Andreas F. Molish. Developing an FPGA module for a mm-Wave system to transfer data at a higher rate. Interpretation, analysis, and validation of the 5G data using python visualization libraries and TDMS library.

Deep Learning and IoT for Smart Agriculture using WSN | Amrita Vishwa Vidyapeetham

- Created an internet connected wireless sensor network (WSN) to log time series data to the cloud. An LSTM based neural network was used to predict suitable crop. Published a paper in the proceedings of IEEE International Conference on Computational Intelligence and Computing Research, 2017

CERTIFICATIONS

- Machine Learning (Stanford University)
- TensorFlow (Deep Learning.ai)
- Certified LabVIEW Developer

ACHIEVEMENTS

- Secured medal of honor in *Embetrix* (national level circuit design contest) at Anokha - 2017.
- Awarded the best outgoing student in high school along with a Certificate of Merit for securing a CGPA of 10/10.
- Received ‘YOUNG SCIENTIST’ award from Dr. APJ Abdul Kalam (Former President of India).