# Varsha L. Thirumalai

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## OBJECTIVE

To apply my skills in embedded systems, networking, the internet of things and artificial intelligence (AI) to make technological driven products available to all sections of society.

## EDUCATION

### Graduate Degree

**Masters of Science** in Electrical Engineering — Aug 2022– May 2024
San Jose State University
**Courses**: Advanced Computer Architecture, Reinforcement Learning for Multi-Robot Networks, Probability, Random Variables and Stochastic Processes.

### Undergraduate Degree

**Bachelor of Engineering** in Electronics and Communication — Aug 2015 – July 2019
PES University, South Campus (Affiliated to Visvesvaraya Technological University)
**Courses**: Embedded Systems, Digital Signal Processing, Pattern Recognition, Neural Networks, Computer Networking, Cryptography, Digital Image Processing, Linear Integrated Circuits.
**CGPA: 7.52/10 (~ 3.02)**

### Pre-University College (11th Grade - 12th Grade)

Jain College, Jayanagar — June 2013 – May 2015
Major: Physics, Chemistry, Mathematics, Biology
**Grade: 90.33%**

### School (1st Grade - 10th Grade)

St. Francis School — June 2003 – May 2013
**Grade: 82.33%**

## EXPERIENCE

**Project Engineer, Wipro technologies, Bangalore, India** — Aug 2019 – May 2022

- Project Related Training-Automation: Integration Testing and Unit Testing on the Car Infotainment System, python scripting using OOPs concept.
- Worked on Script development, bug fixing, API development using Python and C. Worked in the lab to schedule test runs and perform Regression Testing.
- Hands on experience with building test Automation for the Comfort and Control Module and Navigation Module of the Infotainment system.
- The Project enabled me to develop a deeper understanding of the automotive industry and gain insights on the broader disciplines in this domain. Developed lean and agile methodology skills working on this project.

**Intern, Acceleron Labs, Bangalore, India** — Jan 2019 – Mar 2019

Created an application that calculated power consumption, CPU memory usage, and internal performance of the product using Apache Spark and set up an Environment in the lab for Distributed Computation.
**https://acceleronlabs.com/**

**Intern, Ezenith Pvt Ltd., Bangalore, India** — Jan 2018

Built a drone for area surveillance application. Flight time of 15minutes and the drone covered a large area of the neighborhood.

**https://in.linkedin.com/company/ezenithedu**
**https://www.facebook.com/EzenithEducation/photos/drone-development-internship-at-bits-pilanidrones-dronetraining-uav-aero-aeronau/1279310022264764/**

## SKILLS

**Programming**: C, Python
**Hardware**: 8086, LPC1768 Arm Cortex M3, Arduino, Raspberry Pi.
**Software Tools** : MATLAB, Processing, Vivado Xilinx, Cadence: Analog and Digital Design
**Misc**: UAV Systems, Kinematics, Autopilot mechanisms, Calibration Parameters, Task Prioritization

## PROJECTS AND CERTIFICATIONS

**Certified For Deep Neural Networks by Andrew Ng** 2018
https://www.coursera.org/account/accomplishments/verify/MHDPNR9CGEYN

**3D Printing Workshop Conducted by IEEE PESIT** 2018
Learned the technology behind 3D printing and the operation of 3D printers. Designed keychains and accessories.

**Final Year Project "Vend Tech": Vending Machine** 2019

Built a vending machine that vends out snacks and electronic components used for building small circuits with an IOT based cash transaction mechanism. We used the Arm Cortex Microcontroller and embedded C to code the machine. We also tried to mimic the RFID card transaction system. We also designed a cost effective structure of the vending machine called the mechanical multiplexer that consumes less power.

**Codes and Pictures:** https://github.com/vthiru300/vending_machine_project
**Mechanical mux design:** https://www.thingiverse.com/thing:3154074

## ACHIEVEMENTS AND LEADERSHIP ROLES

**Kludge 2k18 The Electronics Design Contest – PES University, Bangalore** Mar 2018
Mentor: Mentored the students who took part in the contest.
Gave a seminar on Drone development.

**WIDS (Women in Data Science) Datathon - Kaggle** Feb 2019
Won 9th place and was awarded a prize money at the Indian Institute of Management, Bangalore.
The WiDs Datathon 2019 is a collaboration led by the Global WiDs team at Stanford, the West Big Data Innovation Hub, and the WiDs Datathon Committee. The challenge was to create a model that predicts the presence of oil palm plantations in Satellite imagery.
**Leaderboard:** https://www.kaggle.com/c/widsdatathon2019/leaderboard
**Code:** https://www.kaggle.com/varsha300/fastai-starter

## ADDITIONAL

**Hobbies**:
Still life drawing, Watercolor Painting, Oil Painting, Mountain Trekking and Photography.
**Languages:**
Fluent in English, Hindi;
Conversational Proficiency in Telugu, Kannada