

# PRANJALI MADUR

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## SUMMARY

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Passionate and detail-oriented Embedded Software Engineer seeking a great start. Looking for an opportunity to put my technical knowledge and make a substantial contribution by solving real world complex problems. I have a strong technical background essential to this role, including C, C++, and Assembly language.

## EDUCATION

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<b>Master of Science</b> , Electrical Engineering University of Texas, Arlington	<i>Aug 2018 - May 2020</i>
<b>Bachelor of Engineering</b> , Electronics and Telecommunication MKSSSs Cummins College of Engineering for Women	<i>Aug 2013 - May 2016</i>

## SKILLS

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**Programming Languages:** C, C++, Assembly, Python  
**Development Environments:** MS Visual Studio, CCS, Keil  
**Peripherals:** UART, I2C, SPI, GPIO, USB, ADCs  
**Hardware:** PCB designing, Circuit debugging, PCB soldering, Oscilloscope, DMM  
**Tools:** GIT, BASH, Embedded Linux  
**Systems:** Linux/Unix, Windows  
**Soft Skills:** Team player, Willingness to learn, Problem-solving, Motivated

## EXPERIENCE

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<b>Manufacturing Engineering Intern</b> , PROCEPT BioRobotics	<i>Sep 2020 - Dec 2020</i>
<ul style="list-style-type: none"><li>Performed assembling and functional inspection process on a test fixture and testing different sub-assemblies on the Manufacturing floor.</li><li>Developed a Rework manual for various finished goods to improve the rework process time and increase production rate by 75% using DFM, pFMEA, dFMEA and rework steps.</li><li>Improved the manufacturing process instructions and quality inspection documents for ease of understanding of the operators.</li></ul>	
<b>Software Engineer</b> , Atos India Pvt LTD	<i>Feb 2017 - Jul 2018</i>
<ul style="list-style-type: none"><li>Performed migration of production servers from a customer environment to cloud platform(AWS/Azure/DCiaBox) using Platespin migration tool.</li><li>Lead a team of 15 people and delivered the project ahead of schedule by delegating the tasks.</li><li>Developed a web application using Servlets, Database and web development languages.</li></ul>	

## PROJECTS

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**Real Time Operating System for ARM Cortex M4**

- Audited the course, real time bluetooth networks from UT Austin and implemented a real time operating system to create a fitness tracking device on the TM4C123GH6PM using BOOSTXL-EDUMKII and CC2650.
- Created Real Time OS for ARM Cortex M4 using Embedded C supporting cooperative and pre-emptive task scheduling and inter-task communication.
- Supported system calls such as yield, sleep, suspend along with semaphore functionalities including priority scheduling and priority inversion techniques.

**Low Cost Programmable Pulse Generator with Automatic Level Control**

- Implemented a TM4C123GH6PM based embedded project in Code Composer Studio IDE using Embedded C.
- Designed a signal generator circuit generating various waveforms with controllable amplitude, frequency and offset.
- Controlled number of cycles of the sine waveform and duty cycle of the square waveform.
- Command line interface capable of controlling the system and providing measurements data back to the user(UART interface).

**SDRAM Controller design using Processor 80386DX**

- Designed SDRAM controller that allows SDRAM memory(MT48LC8M8A2) to interface with Microprocessor 80386DX having asynchronous memory support.
- Determined Read and Write Cycles for different Burst lengths(2,4,8) for the SDRAM.

**Automatic Destination Vehicle for Transportation of Lab Equipment in College**

- Implemented Atmel AT89s52 microcontroller project using Embedded C in Keil vision4 IDE.
- Developed a system carrying payload using RFID reader, GSM for communication and Line Sensors for vehicle movement.
- Built a prototype system that does the job without any delay specially when peons are not available in college.