SWAPNIL CHAUGHULE

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EDUCATION

UNIVERSITY OF MASSACHUSETTS LOWELL, MA, USA
Master of Science in Computer Engineering, GPA - 3.6 — December 2017

UNIVERSITY OF MUMBAI, MH, INDIA
Bachelor of Engineering in Electrical Engineering — June 2015

PROGRAMMING SKILLS

C, C++, Python, Java, Data Structures, Algorithms, Object Oriented Programming, Device Drivers, Real Time Operating System, Multi-threading, Socket Programming, HTML

TOOLS

OpenCV, Matlab, GIT, GNU Debugger, Wireshark, Minicom, IAR Workbench, MPLAB, Magic draw, Visual Studio, Android Studio, Eagle, Solid Works, AutoCAD, VMware, Keil, LTSpice

PROTOCOLS

RS-232, USB, TCP/IP, UDP, UART, I2C, SPI

CONTROLLER

Atmega328p/32/16, STM32F107 (ARM Cortex-M3), STM32L432KC (Cortex-M4) PIC16F688, Intel Galileo, Raspberry Pi Zero, dsPIC30F6014A, PIC18F25K20, ESP32, Arduino MKR Wi-Fi 1010, Arduino UNO

EXPERIENCE

Media Recovery Inc. dba SpotSee Holdings, Dallas, TX
R&D Engineer — Present

- Collaborate with other team members to resolve hardware and software issues with core products.
- Document and maintain product work instructions and tests.
- Research hardware and software solutions for current and future products.
- Collaborate with globally distributed teams for product and business development.

Synaptics – Johnson Service Group, Waltham, MA
Jr. Software Engineer — April 2018 – May 2018

- Verified, communicated and resolved software issues.
- Performed manual and automated testing methods on companies software products

CMINDS, University of Massachusetts Lowell, Lowell, MA
Graduate Student Researcher (Volunteer) — October 2016 – December 2017

- Studied and Implemented different information hiding algorithms using Matlab and C++.
- Summarized and documented the research.

THESIS

A New Robust, Secure and High Capacity Watermarking Schemes for Image Authentication and Recovery via the Discrete Wavelet and Arnold Transform — December 2017

- Implementing a watermarking algorithms to embed and encrypt message image in a carrier image
- Implementing a solution to detect and recover from tampering on message image

PUBLICATIONS

S. Swapnil and D. B. Megherbi, **"A Robust Double-Blind Secure High Capacity Watermarking and Information Hiding Scheme For Authentication and Tampering Recovery Via the Wavelet and Arnold Transforms,"** 2018 IEEE International Symposium on Technologies for Homeland Security (HST), Woburn, MA, 2018, pp. 1-5. — October 2018

S. S. Chaughule and D. B. Megherbi, **"A Robust Secure and High Capacity Image Watermarking Scheme for Information Exchange in Distributed Collaborative Networked Intelligent Measurement Systems,"** 2018 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications (CIVEMSA), Ottawa, ON, 2018, pp. 1-5. — June 2018

PROJECTS

Client-Server Architecture based Remote Terminal Application	November 2016
Simulated Memory Management System of a Generic Operating System	October 2016
Intel Galileo and PIC16F688 based Real Time Data Acquisition	February 2016
STM32F107 based Wireless Sensor Network	January 2016
Data Transfer using UDP over an Unreliable Connection	October 2015
Protection of Transformer and Real Time Analysis of Oil Parameters	April 2015