BOWEN SONG

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EDUCATION

09/2017-08/2019	**Boston University (BU)**, Boston MA, USA

- ◇ M.S in Electrical and Computer Engineering
- ◇ Core Courses: Project Design, Data Structure, Optics

09/2012-08/2017	**University of Victoria (UVic)**, Victoria BC, Canada

- ◇ Bachelor of Engineering in Electrical and Computer Engineering
- ◇ Last Sessional GPA: 8.00/9.00
- ◇ Core Courses: Digital Signal, Image and Video Processing, Optimization, Control System Design, Error Control Coding, Pattern Recognition, Wireless Communication, Radar

INTERNSHIPS

University of Victoria, Victoria BC, Canada   05/2017-08/2017

Undergraduate Researcher and Entrepreneur, Department of Electrical Engineering, Propagation Laboratory

- ➢ Implemented SDR Radar System with DSP enhancement;
- ➢ Focusing on LFM Radar and Time Compression-Overlap Add DSP technique.

HELLA Innenleuchten-Systeme GmbH, Wembach, Germany   01/2017-04/2017

Electrical Engineering Praktikant, Department of D-LAB (Light Lab)

- ➢ Investigated Light Guide spectrum and effect of production with NO_2;
- ➢ Developed software for managing company resource capacity;
- ➢ Designed RGB module testing system and procedure for pre-series production.

IBM Canada, Victoria BC, Canada   05/2016-08/2016

Software Developer, Department of Technology Engineering Service

- ➢ Developed software alongside a team and enlisted in life cycles of multiple software development process including sprint planning, implementation, and bug-fix maintenance;
- ➢ Created IBM Lotus Notes/Domino Reader, and scheduled Maximo Database Tracker.

Western Digital Corporation, Ayutthaya, Thailand   09/2015-10/2015

Student Trainee, Firmware Laboratory

- ➢ Worked with product testing team on product firmware reliability tests and focused on designing software program replacing manual firmware update testing procedure;
- ➢ Created Automated Product Firmware Update Testing Software.

Metallurgical Corporation of China (MCC), Shanghai, China   05/2011-09/2011 & 2012

Engineering Assistant

- ➢ Assisted Engineers with AutoCAD drafting of mechanical drawings and print-outs;
- ➢ Applied technical knowledge to innovate, design and develop processes, tooling, assembly fixtures and procedures.

RESEARCHES

Enhanced LFM Radar   05/2017-08/2017

- ➢ Developed low power LFM Radar with SDR for aerial vehicle management system in a team effort;
- ➢ Cooperatively investigated novel N-signal enhancement by combining multiple known radar waveforms;
- ➢ Implemented TC-OLA DSP improvement;
- ➢ Experimented Doppler effect cancellation scheme.

LIN Communications and Product Quality Control   03/2017-04/2017

- ➢ Developed Body Control Modules for RGB module over Vector CANoe with CAPL;
- ➢ Designed automated Quality Control testing system;

➢ Investigated LIN BUS Network Communication.

Capacity Managing Software   01/2017-02/2017

➢ Developed C++ program for managing company resources and designed custom server database;

➢ Created user friendly collaboration system.

IBM Lotus Notes Reader   05/2016-08/2016

➢ Monitored IBM notes email and updated data base;

➢ Continued the revived project starting from gathering changed new requirements to design and develop the program till publication.

Automated Product Firmware Update Testing Software   09/2015-10/2015

➢ Developed firmware product testing software with help from supervisors and co-workers inside Firmware Lab;

➢ Designed a C++ program to replace manual involvement in branded product reliability testing, which built multiple connections for controlling and monitoring the unit under test;

➢ Followed testing procedure, recalibrated UUT during error incidents, and reported testing result.

Automated Cell Image Segmentation and Edge Detection Algorithm   2015

➢ Customized segmentation algorithms to isolate overlapped cells in Pap smear image;

➢ Acted strictly according to the following three steps: 1. enhance the characteristic of nucleus and cell edges with Bi-group enhance approach; 2. trace the contour of cell edge with Cytoplasm Contour Detection Approach; 3. trace the contour of nucleus edge within each cell with Nucleus Contour Detection Approach.

Smart Campus Design and Development for Natural Disaster (GIS)   2014

➢ Assessed and improved emergency response system of University of Victoria with alarming system and escape plan.

Pulse-Width-Modulated Signal Generation and Monitoring System (C Assembly)   2014

➢ Developed an embedded system with microcontroller to monitor and control a PWM signal generated by NE555 IC external timer.

Self-Orientated Nuclear Waste Cleaning Robot (C)   2012

➢ Built a robot prototype and programmed Micro-controller to self-detect and clean up an emulated nuclear waste incident.

EXTRACURRICULAR ACTIVITIES

Global Community Mentorship   09/2014-05/2015

University of Victoria Global Community Mentorship Program

➢ Helped the students prepare for the culture shock and language barrier as the mentor in the mentorship program.

The Mustard Seed Hunger Fighting   09/2013-05/2014

The Mustard Seed Street Church

➢ Prepared and served food on weekends for people in need.

SKILLS

✧ **PROFESSIONAL-**

Equipment: Oscilloscope, Multi-meter, Signal Generator, Logic Analyzer, USRP transceiver, Spectrometer

Programming Languages: C, C#, C++, C Assembly, MATLAB, HTTP, VB.NET, Python, CAPL

Operating Systems: Apple OS, Windows XP/7/10, Linux, Android

Software: Eclipse, R, MEFiSTo, Visual Studio, Wireshark, PuTTY, DB2, IBM Domino, MAXIMO, MATLAB, GNURadio, Xilinx, MS Office Suite, iWork, LT Spice, CANoe, Trello

✧ **PERSONAL-**Occupational First Aid Level 1; APEGBC Student Member; Municipal TaiChi Master; Level 10 Piano Certificate; Olympic Second Level Swimmer; Triathlon Enthusiast.