

# Houssem Marzougui

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<https://marzougui-h.tech>



**Summary** – Results-driven electrical and software engineer seeking a full-time position in an engineering and professional innovation environment which offers key participation, team-oriented tasks, immediate challenges, and career opportunity.

## Professional Attributes

- Fast learner with a strong desire to master new concepts and technologies.
- Have an interest in crafting efficient and scalable modern software solutions.
- Exceptional interpersonal and collaboration skills
- Excellent written and verbal communication in **English** and **French**.
- Strong capacity to work under stress and time constraint.

## Skills

- Compressive Sensing, Signal processing
- HTML5, CSS3
- Material UI, Bootstrap, Tailwind
- Python, JavaScript, MATLAB
- React JS, Next JS, REDUX
- MongoDB, MySQL, Strapi
- Node JS, Express JS, EJS, MERN Stack
- Version Control (Git), GitHub
- Heroku, Netlify, and Vercel deployment
- REST API, Postman, Docker (basic), Bash
- Data Structures and Algorithms
- Strong leadership and management background
- U.S Military Service Academy Graduate

## Education

### Master of Science in Electrical and Computer Engineering

University of Victoria. 2017-2020

Victoria, BC, Canada

### Bachelor of Science in Electrical Engineering

United States Naval Academy. 2007-2011

Annapolis, MD, USA

## Experience

### ❖ Remote Moderator

OneClass | Toronto, ON, Canada

08/2018 – Present

- Supervise and moderate platform educators to ensure highest quality service to students in North America.
- Engage undergraduate students across Canada and the U.S understand their math, computer science, and engineering learning objectives through extensive project assignments.

### ❖ Technical Analyst

Deloitte | Kitchener, ON, Canada

01/2019 – 11/2019

- Produced and partially managed Scientific Research and Experimental Development (SR&ED) technical reports for clients in many industries including TMT and Manufacturing in English and French in a rapid and challenging work environment.
- Discussed and studied clients full design engineering projects to determine their innovation levels and SR&ED eligibility.

### ❖ Research Assistant

University of Victoria | Victoria, BC, Canada

05/2018 – 04/2020

- Implemented and simulated medical ultrasound imaging algorithms in Matlab using adaptive and conventional

plane wave compounding techniques that reduced computational complexity and maintained similar image quality.

## ❖ Teaching Assistant

University of Victoria | 📍 Victoria, BC, Canada

09/2017 – 04/2020

- ECE 355 - Microprocessor Based Systems: Introduction to programming microprocessors using C language.
- ECE 426 - Robotics: Introduction to robot manipulator kinematics using Matlab.
- ECE 365 - Applied Electronics and Machines: Introduction to the foundational elements of electrical machines and electronics circuits.

## ❖ Software Engineer at Design office

The Naval Electronics Division | 📍 Tunis, Tunisia

05/2015 - 02/2017

- Developed a Tracking Software using TLD algorithm to enhance weapon systems by adding the capacity of auto-aiming (.Net/C#, DSP)
- Designed a smart ship engine surveillance system where Temperature and pressure are collected from the engine sensors using an Arduino board and communicated via TCP/IP connection to a Web App that ensures treating and displaying the data. (SPA, C++, Node-Red, JavaScript, SQL)
- Developed a Technical report and messaging software to support Mechanical engineers on warships. (SQL, .Net/C#)

## ❖ Communications Officer

Tunisian Navy | 📍 Tunis, Tunisia

06/2011 – 04/2015

- Developed and supervised maintenance planning for all transmission Radio equipment onboard naval units to ensure full operational status of different communication systems.
- Mastered the operation of radio communication, transmission, and satellite systems onboard that are essential for operational safety.
- Developed and conducted training sessions for communication team members.
- Conducted several safety and damage control drills and exercises.

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## Personal Projects

- [Digi-Thrifting](#): An E-commerce application with Cart, Admin and PayPal features built the MERN Stack and Redux.
- [DJ-Events](#): Full-Stack website that allows users to check on upcoming DJ events uploaded by authenticated users. Built in Next.js and Strapi.
- [CodeFever](#): Personal Blog about programming, built in Next.js and Tailwind
- [Portfolio](#): Personal Portfolio where I show all my projects, built in React.js, Material-Ui, and Bootstrap.

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## Publications

- "H. Marzougui and D. Rakhmatov, "Data-Driven Sensor Array Subsampling for Plane-Wave Ultrasound Imaging," 2019 IEEE International Ultrasonics Symposium (IUS), Glasgow, United Kingdom, 2019, pp. 2337-2340, doi: 10.1109/ULTSYM.2019.8925560".

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## Interests

- Technology, Hiking, cooking, Health and wellness, Crypto Mining and Trading (favorite coin: ADA!)

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## Languages

- English (Fluent) - French (Fluent) - Arabic (Native)

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## References

- Amy San Miguel, Team Leader and Tax Manager, Gi3, Deloitte, 519-650-7820, [asanmiguel@deloitte.ca](mailto:asanmiguel@deloitte.ca)
- Dr. Daler Rakhmatov, Graduate Supervisor, University of Victoria, 250-472-5214, [daler@ece.uvic.ca](mailto:daler@ece.uvic.ca)