ANDJELA DIMITRIJEVIC

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SUMMARY

- ❖ Biomedical engineering student – PhD Candidate
- ❖ Able to adapt easily to different work environments
- ❖ Bilingual: French and English, spoken and written
- ❖ Professional and relational teamwork skills: reliable, respectful, good communicator
- ❖ Efficient and organised while accomplishing several projects simultaneously
- ❖ Known softwares: Python, C++, C*, R, Matlab, CATIA and DipTrace
- ❖ Fields of interest: medical imaging, medical robotics and neuroscience

EDUCATION

UNDERGRADUATE-TO-PHD FAST-TRACK **2022-…**
POLYTECHNIQUE MONTRÉAL, NEUROPOLY LAB, CO-SUPERVISION WITH ÉCOLE DOCTORALE MSII IN STRASBOURG

BACHELOR'S DEGREE IN BIOMEDICAL ENGINEERING **2017-2021**
POLYTECHNIQUE MONTRÉAL, QUÉBEC, CANADA
QUEENSLAND UNIVERSITY OF TECHNOLOGY (BRISBANE, AUSTRALIA) 2019
TÉLÉCOM PHYSIQUE STRASBOURG (STRASBOURG, FRANCE) – CONCENTRATION IN MEDICAL ROBOTICS, DOUBLE DIPLOMA WITH FRENCH MASTER IRIV 2020-2021

SCIENCES AND ARTS PREUNIVERSITY DIPLOMA **2017**
COLLÈGE JEAN-DE-BRÉBEUF

RELEVANT EXPERIENCES IN BIOMEDICAL ENGINEERING

DESIGN PROJECT: DEVICE FOR MEASURING HUMAN ACTIVITY –
POLYTECHNIQUE MONTRÉAL, CANADA 2019
Integrative project 2: Collaborate with a team of 2 people to design a device for measuring the heart rate and blood oxygen levels as well as identifying 3 different movements done by a user.

- Design, build and test a functional prototype using a Cypress Programmable System on Chip (PSoC) microcontroller with different bio and motion sensor modules
- Program using PSoC software in C
- Initialise a MAX30102 High-Sensitivity Pulse Oximeter and Heart-Rate Sensor and a LIS3DH accelerometer
- Understand master and slave communication protocols
- Write a final report on the obtained results

EXTERNAL DIRECTOR OF THE POLYCORTEX TECHNICAL SOCIETY ON NEUROTECHNOLOGY –
POLYTECHNIQUE MONTRÉAL, CANADA 2018

- As an external director, ensure that existing sponsorships supporting the technical society are maintained by contacting the sponsors directly to renew previously established contracts. Constantly seek new opportunities to initiate new contracts.
- Attend meetings to learn about neurotechnologies in order to contribute to their development
- Participate in events that promote the society, as well as, engineering and research in events like «Techno au féminin» (female techno), in other Montreal engineering schools (ÉTS)

- Understand the concept of filtering and amplifying physiological signals of the brain to facilitate their interpretation afterwards
- Become familiar with DipTrace software for schematic representations and PCBs (printable circuit boards) of circuits designed and tested subsequently while designing an alpha wave acquisition circuit for an electroencephalogram

WORK EXPERIENCES

RESEARCH INTERN AT THE MAGNETIC RESONANCE IMAGING IN CHILDREN LABORATORY (MAGIC LAB) DIRECTED BY BENJAMIN DE LEENER –
POLYTECHNIQUE MONTRÉAL, CANADA 2020/05-...

- Develop a tool for quality control of gray matter and white matter segmentations using a pediatric MRI dataset of children aged 2 to 8 years with a convolutional neural network approach
- Implement the use of Tensorflow 2.0 in addition to using TensorBoard for visualizing the losses of a generative adversarial neural network
- Train the network while making an adequate display of the images and finally test the chosen model with unseen images by the network
- Write a report of the work completed while making presentations along the way allowing a project follow-up
- Carry out a master's project in collaboration with Télécom Physique Strasbourg, which the produced memoir is intitled : “Medical Image Registration Using Deep Learning Techniques Applied to Pediatric Magnetic Resonance Imaging (MRI) Brain Scans”

PRACTICAL WORK MANAGER FOR COURSE INF1007 -
POLYTECHNIQUE MONTRÉAL, CANADA 2021/08-2021/12

- Assume the role of practical work manager for baccalaureate students for the introductory programming course (INF1007) by mastering concepts of the Python language
- Answer multiple questions related to the Python programming language during practical work sessions to ensure a comprehension and solve different types of technical problems
- Provide tips for students to avoid future difficulties
- Create assignments as well as a projects to be carried out by the students
- Remain organized with work colleagues or other practical work managers to ensure students' understanding during the session
- Correct assignments as well as programming projects for a group of around forty students

TUTOR FOR THE STUDENT SERVICES SUPPORTING STUDENTS WITH DISABILITIES –
POLYTECHNIQUE MONTRÉAL, CANADA 2018-...

- Assume the role of tutor for bachelor students enrolled in the electrical circuit course (ELE1600A) and Calculus I (MTH1101) as well as other first year courses
- Review important concepts with students regularly before an exam while focusing on essential topics
- Suggest new learning methods to foster an adequate understanding

SCOLARSHIPS

FRONTENAC SCOLARSHIP **2020-2021**
FONDS DE RECHERCHE DU QUÉBEC- NATURE AND TECHNOLOGIES (FRQNT)

UNDERGRADUATE INTRODUCTION TO RESEARCH SCHOLARSHIP **2020**
IVADO, COLLABORATIVE INSTITUTE IN THE FIELD OF DIGITAL INTELLIGENCE

ENTRY SCHOLARSHIP **2017**
POLYTECHNIQUE MONTRÉAL