TORONTO, ONTARIO, CANADA
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Ioakeim N. Kaltsidis

SKILLS

Technical

- Proficient coding capabilities (Python, C, Swift, Arduino, Visual Basic, VHDL)
- Experienced with SolidWorks, AutoCAD, MATLAB, Simulink, LabVIEW, ANSYS, Xilinx ISE
- Designed and tuned PID controllers for course and laboratory projects
- Skilled in technical report writing, data retrieval, quantification, and analysis
- Laboratory experience through courses (Robotic Systems, Advanced Mechatronics Systems Design, Digital Process Control Design)
- Developed HMI for robotics and mechatronics lab experiments
- Experienced with implementing and debugging circuitry utilizing oscilloscope, function generator, multimeter and soldering iron
- Capable of adhering to project constraints while introducing feasible and innovative solutions

Communication & Organization

- Effective written and oral communication skills gained through formal presentations
- Interpersonal skills to encourage productive work environments
- Trilingual: fluent in English, Greek and Japanese
- Manages time by prioritizing tasks for maximum productivity
- Contributes quality work in high pressure environments

EDUCATION

Master of Applied Science Candidate (M.A.Sc.), Mechanical and Industrial Engineering (MIE)
University of Toronto, 27 King's College Cir, Toronto, ON, CA — Sept 2019 – Anticipated August 2021

- Research area in multi-robot coordination (UAV-UGV) for mobile target search applications

Bachelor of Engineering, Major in Mechanical Engineering (BENG.MECH)
University of Guelph, 50 Stone Rd E, Guelph, ON — Sept 2015 – June 2019

- Dean's Honors List – Winter 2017, Winter 2018, Winter 2019
- Specialized in the Mechatronics, Robotics and Sustainable Energy streams

Mechatronics Systems Design Project — Jan 2018 – April 2018

- Successfully designed and constructed a nut and coin sorting machine, utilizing stepper motor, motor controller and servo interfaced with an Arduino Mega 2560 microcontroller

Digital Process Control Design Project — Jan 2019 – April 2019

- Successfully designed and implemented a controller for a Cross Coupled 4-Tank System utilizing MATLAB for system simulation and Simulink for controller implementation

Advanced Mechatronics Systems Design Project — Jan 2019 – April 2019

- Successfully designed and constructed an autonomous gliding plane, utilizing 5 mini-servos for flight dynamics control, IMU sensor for orientation and Arduino Nano microcontroller

Mechanical Engineering Capstone Design Project — Sept 2018 – April 2019

- Designed and manufactured an impact loading drop tower tester for research involving auxetic material applications
- In charge of all electronics used for machine functionality and data acquisition

PROFESSIONAL EXPERIENCE

Research Assistant – Robotics Institute
University of Guelph, 50 Stone Rd E, Guelph, ON — Jan 2019 – April 2019

- Understanding of neural network methodologies utilizing TensorFlow and Keras for image classification applications
- Introduced to use of Docker for team collaboration and work distribution
- Experimented with image augmentation and image resolution sizing converting low-resolution images to super-resolution images

Research Assistant – Mechanical Research Lab
University of Guelph, 50 Stone Rd E, Guelph, ON Sept 2018 – Dec 2018

- Performed sensor integrations (dissolved oxygen, conductivity, pH) for a bioreactor system designed to house and sustain biological organisms
- Utilized LabVIEW for real-time data graphing and interpretation
- Designed permeable tube mount for mass transfer of nutrients into system

Research Associate – Institute of Automation and Applied Informatics (IAI)
Karlsruhe Institute of Technology, 76131 Karlsruhe, Germany May 2018 – Aug 2018

- Selected as 1 of 18 students across 9 Ontario universities to take part in the Ontario – Baden Württemberg Summer Research Exchange Program
- Contributed to research project for System Integration for Nanophotonic Systems
- Optimized and designed an automated high precision adhesive dispensing and UV light curing process system for micro and nanophotonic applications (photonic wire bonds)
- Developed automation recipes utilizing Python and TwinCAT software
- Utilized MATLAB to develop light ray simulations for polymerization testing of adhesives
- Designed, developed, and implemented custom parts into system utilizing Creo Parametric modeling software and heavy machining tools
- Collaborated with various international researchers and industry professionals

Sobotec Advanced Manufacturing Team – Co-op Student
Sobotec Ltd., 67 Burford Rd, Hamilton, ON May 2017 – Sept 2017, May 2019 – Sept 2019

- Modelled 3D AutoCAD files of architectural layouts in SolidWorks
- Developed tooling and nesting abilities using NC Express Software
- Optimized manufacturing processes including material assembly and fabrication
- Coded programs for custom panel bending utilizing Bend Express software
- Operated heavy Prima Power manufacturing machinery including EBe Bending SG Shear

LEADERSHIP AND VOLUNTEER EXPERIENCE

Professional Development Conference - Facilitator
University of Guelph, 50 Stone Rd E, Guelph, ON May 2017 – Feb 2018

- Responsible for the organization of the Professional Development Conference 2018, engaging 100 engineering students with professionals in their respective disciplines
- Planned speaker presentations, organized schedules and led the volunteer committee

Hyperloop Team – Captain of Frame
University of Guelph, 50 Stone Rd E, Guelph, ON Mar 2017 – May 2018

- Contributed to innovative pod design to be propelled in a vacuum as a potential method of human transportation
- Responsible for mechanical design of carbon fiber and aluminum pod frame

Robotics Team - President
University of Guelph, 50 Stone Rd E, Guelph, ON Nov 2016 – Oct 2017

- Led a team of engineering and computer science students to design, code and build various robotic devices for competition purposes

English Tutor
University of Guelph, 50 Stone Rd E, Guelph, ON Sept 2016 – April 2019

- Regularly met with Japanese international exchange students to enhance written and oral English communication skills including essay writing