Hannah Szentimrey, EIT, MASc

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Summary of Skills

- Have experience with deep learning and computer vision models
- Languages: Python | C | C++ | Java
- Frameworks/Libraries: Keras | Tensorflow | scikit-learn | ONNX
- Tools/Processes: Git | Anaconda | Jupyter Notebooks | Linux OS | Agile development | Bash scripts

Education

Master of Applied Science, Engineering + Artificial Intelligence
University of Guelph – Guelph, ON — September 2018 – October 2020

- Research was focused on using machine learning to improve and speed up the placement step in the FPGA CAD flow, specifically using CNNs and convolutional encoder-decoder networks to identify and manage congestion seen in heatmaps
- First author on "Machine learning for Congestion Management and Routability Prediction within FPGA Placement", published in ACM Transactions on Design Automation of Electronic Systems (TODAES)
- Received the NSERC – Canada Graduate Scholarship – Master's (CGS-M) in May 2019
- Received the Vector Scholarship in Artificial Intelligence (VSAI) in January 2019

Bachelor of Engineering, Computer Engineering (Co-op)
University of Guelph – Guelph, ON — September 2013 – June 2018

- Cumulative average over degree with all courses was 94%
- CPES Dean's Scholarship for one of the highest academic performances in the previous academic year for 4 years
- E. B. MacNaughton Convocation Prize for being chosen as the W. C. Winegard Medal nominee for the College of Engineering & Physical Sciences
- Named to the College of Engineering & Physical Sciences Society of Excellence for excellent academic achievement and contributions to the University of Guelph community
- Ontario Professional Engineers Foundation for Education Gold Medal for having the highest cumulative average in engineering at convocation

Work Experience

Graduate Teaching Assistant
University of Guelph – Guelph, ON — September 2018 – April 2020

- Was involved with preparing lab and tutorial materials for the course content on a weekly basis
- Lead tutorial and lab sections with up to 45 students attending each one
- Was responsible for marking labs, assignments, midterms, and final exams
- Courses: ENGG*2410 – Digital Systems Design Using Descriptive Languages in Fall 2018 and 2019; ENGG*3130 – Modelling Complex Systems in Winter 2019; CIS*3120 – Digital Systems in Winter 2020

Research Assistant
University of Guelph – Guelph, ON April 2018 – August 2018

- Worked on a project in a team of 3 to develop a website using Django which could optimize Archimedes' screws for power generation for a client
- Individually developed and tested features and fixed various bugs in Python for the Archimedes' screw project

Innovation Web Application Developer & DevOps Co-op
Sun Life Financial – Waterloo, ON September 2017 – December 2017

- Was part of the innovation team which experimented with new technology that could be used in the business as well as the DevOps team responsible for integrating tools to help software developers
- Worked in a team of 3 developers to build prototypes and demos for the Google Home as well as develop a website using HTML, JavaScript and CSS within 2 weeks
- Individually migrated projects from using old development tools such as Dimensions and Ant to using new tools such as Bitbucket, Jenkins and Maven and trained other developers on the migration

Hardware Designer Co-op
Curtiss-Wright Controls Defense Solutions – Ottawa, ON May 2017 – August 2017

- Was part of the FPGA team responsible for designing, developing and debugging modules
- Individually developed self-checking test benches in Verilog to simulate and verify FPGA functionality
- Reviewed schematics and PCB layouts for products under development to find any potential issues with the design and provide feedback

Software Developer Co-op
Christie Digital Systems Canada Inc. – Kitchener, ON January 2016 – August 2016

- Collaborated with a team of 3 software developers to develop a user interface and unit tests for cinema projectors in C++ and QML according to specifications
- Successfully upgraded the current version of Qt being used in cinema projectors
- Efficiently worked with a team of 9 individuals from different departments to deliver software under the Scrum methodology

Student Design Engineer
Evertz Microsystems Ltd. – Burlington, ON April 2015 – August 2015

- Worked on a team to design, develop and debug hardware platforms using FPGA development
- Developed lists of warnings and scripts to stop Xilinx and Altera FPGA builds early to report potential issues earlier in the development cycle
- Independently developed, modified, and debugged modules to fit current project needs as well as future project needs

Farm Worker
Szentimrey Seeds Ltd. & Szender Farms Ltd. – Branchton, ON June 2008 - Present

- Have worked on the family farm which runs a commercial grain elevator and produces chicken and seed
- Efficiently analyzed and removed unwanted seed varieties from 300 acres worth of soybean, wheat, barley, and oat seed fields on a yearly basis
- Assisted in the maintenance of a poultry barn of 17,000 chickens in a fast-paced environment